

AD-A054 504

HUMAN RESOURCES RESEARCH ORGANIZATION ALEXANDRIA VA
DEVELOPMENT OF JOB RELEVANT PAPER AND PENCIL TESTS.(U)
JUN 73 H WAGNER, C D FINK, R D BEHRINGER

F/G 5/9

DAH19-73-C-0004

NL

UNCLASSIFIED

1 OF 2
AD
A054504



FOR FURTHER TRAN

E6774

Cath

AD A 054504

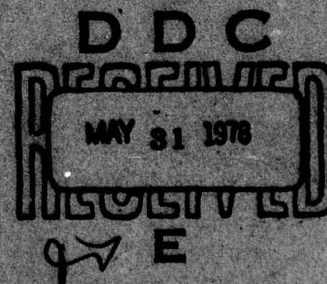
HumRRO

①
H



AD No.

DDC FILE COPY



HUMAN RESOURCES RESEARCH ORGANIZATION

Approved for public release;
distribution unlimited

This material has been prepared for review by appropriate organizational or sponsor agencies, or to record research information on an interim basis.

The contents do not necessarily reflect the official opinion or policy of the Human Resources Research Organization, and their preparation does not indicate endorsement by the Organization's contracting agencies.



The Human Resources Research Organization (HumRRO) is a nonprofit corporation established in 1969 to conduct research in the field of training and education. It was established as a continuation of The George Washington University, Human Resources Research Office. HumRRO's general purpose is to improve human performance, particularly in organizational settings, through behavioral and social science research, development, and consultation.

Human Resources Research Organization
300 North Washington Street
Alexandria, Virginia 22314

AD A 054504

AD No. ~~1~~
JDC FILE COPY

Consulting Report

DEVELOPMENT OF JOB RELEVANT
PAPER AND PENCIL TESTS

by

Harold Wagner, C. Dennis Fink
Richard D. Behringer, and Currell L. Pattie

June 1973

This Consulting Report has been prepared to provide information to the requesting agency on the results of technical advisory service. It has been issued by the Director of HumRRO Division No. 1 (System Operations). It has not been reviewed by, nor does it necessarily represent official opinion or policy of either the President, Human Resources Research Organization or the Department of the Army.

HumRRO Division No. 1 (System Operations)

HUMAN RESOURCES RESEARCH ORGANIZATION

Approved for public release;
distribution unlimited

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER Consulting Report	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) DEVELOPMENT OF JOB RELEVANT PAPER AND PENCIL TESTS	5. TYPE OF REPORT & PERIOD COVERED Consulting Report	6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Harold/Wagner, C. Dennis/Fink, Richard D. Behringer Currell L./Pattie	8. CONTRACT OR GRANT NUMBER(s) DAHC 19-73-C-0004	9. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 24632107A745
10. PERFORMING ORGANIZATION NAME AND ADDRESS Human Resources Research Organization (HumRRO) 300 North Washington Street Alexandria, Va. 22314	11. CONTROLLING OFFICE NAME AND ADDRESS Department of the Army Office of the Chief of Research and Development Washington, D.C. 20310	12. REPORT DATE June 1973
13. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)	14. NUMBER OF PAGES 175	15. SECURITY CLASS. (of this report) Unclassified
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES Research performed by HumRRO Division No. 1 (System Operations), and HumRRO Division No. 4, Ft. Benning, Ga., under Technical Advisory Services to the Combat Arms Training Board.		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Proficiency Tests (MOS) Paper and Pencil Tests		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The purpose of this project was to develop and evaluate job-relevant paper and pencil proficiency tests in three common subject areas for eight of the combat arms MOS's (11B, 11C, 11D, 11E, 13B, 13E, 16P, and 16R). The three common subject areas were First Aid, Land Navigation, and Rifles.		

DD FORM 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

FOREWORD

This work was performed by the Human Resources Research Organization (HumRRO) Division No. 1, Alexandria, Virginia, and Division No. 4, Fort Benning, Georgia. This study was performed as technical advisory service to the Combat Arms Training Board.

This report provides a description of the procedures used to develop paper and pencil test items which can be incorporated into job relevant MOS proficiency tests. These test items covered three subject areas (First Aid, Land Navigation, and Rifles) that are common to eight combat arms MOSs (11B, 11C, 11D, 11E, 13B, 13E, 16P, and 16R). Evaluation of the test items and the procedures used to develop them could not be completed due to lack of funds. However, a validation plan is presented in this report which can be undertaken when circumstances become favorable.

The study was performed under the direction of Dr. C. Dennis Fink. Dr. Harold Wagner prepared and organized this report. The Land Navigation paper and pencil test items were prepared by Dr. Wagner with the assistance of CPT Robert Muller of the Land Navigation Committee, Fort Benning, Georgia. The First Aid paper and pencil test items were prepared by Dr. Richard D. Behringer with the assistance of MAJ Henry Waters and CPT Brian Davis, Medical Service Corps, Fort Benning, Georgia. The Rifles paper and pencil test items were prepared by Dr. Currell L. Pattie with the assistance of CPT Bruce Hartshorn and SGT Patterson, U.S. Army Infantry School, Fort Benning, Georgia. Mr. Michael R. McCluskey of

Section		<input checked="checked" type="checkbox"/>
Section		<input type="checkbox"/>
Section		<input type="checkbox"/>
BY.....		
DISTRIBUTION/AVAILABILITY CODES		
Dist.	AVAIL.	and/or SPECIAL
A		

HumRRO Division No. 4 was responsible for coordinating the work activities at Fort Benning. Mr. Steven Stewart, Mr. Richard A. Hardy, and Mr. Chester Christie developed the criterion performance test requirements to be used for validation of the paper and pencil test items.

HumRRO research for the Department of the Army is conducted under Contract DAHC 19-73-C-0004. Army training research is performed under Army Project 2Q602107A745.

Meredith P. Crawford
President
Human Resources Research Organization

TABLE OF CONTENTS

	PAGE
A. INTRODUCTION	1
1. Problem	1
2. Objective	1
B. BACKGROUND	1
C. METHODOLOGY	6
1. Determination of Task Criticality	6
2. Determination of Appropriate Testing Methods	11
3. Paper and Pencil Test Development	16
4. Criterion Performance Test Development	20
5. Validation Plan	20
a. Administer Paper and Pencil Tests	20
b. Conduct Criterion Performance Tests	21
c. Obtain Comparable EEC Proficiency Test Results	21
d. Determine Concurrent Validities	22
LITERATURE CITED	23
FIGURES	
1 Job/Task Data Form	9
2 Criticality Rating Form	10
3 Assessibility Rating Form	12

ATTACHMENTS

1a	Assessability of Tasks/Task Components Judged Critical by CATB (First Aid)	25
1b	Assessability of Tasks/Task Components Judged Critical by CATB (Rifles)	32
1c	Assessability of Tasks/Task Components Judged Critical by CATB (Land Navigation)	44
2	Critical Tasks/Subtasks Assessed by Paper and Pencil Test Items and Performance Test Requirements	57
3a	Paper and Pencil Test Administration Instructions	59
3b	First Aid Paper and Pencil Test	60
3c	Rifles Paper and Pencil Test	74
3d	Land Navigation Paper and Pencil Test	96
4a	First Aid Performance Test	119
4b	Rifles Performance Test	148
4c	Land Navigation Performance Test	164

A. INTRODUCTION

1. PROBLEM

The U.S. Army's enlisted personnel management system makes extensive use of paper and pencil proficiency tests to support various Army personnel programs. It is difficult to adequately assess skills and attitudes with such tests. Therefore, there is a need to develop guidelines for identifying those tasks which can and cannot be assessed validly by paper and pencil tests. Also, there is a need to develop additional assessment devices, based on field tests and/or the Enlisted Efficiency Report, to obtain evaluative scores which can supplement those now obtained by paper and pencil tests.

2. OBJECTIVE

The purpose of this project was to develop and evaluate job-relevant paper and pencil proficiency tests in three common subject areas for eight of the combat arms MOSs (11B, 11C, 11D, 11E, 13B, 13E, 16P, and 16R). The three common subject areas were First Aid, Land Navigation, and Rifles.

B. BACKGROUND

In 1965-66 as part of the Army's Brown Board study, HumRRO described and evaluated the Army's Enlisted Evaluation System. This study recommended that the Enlisted Evaluation Center (EEC) develop performance-based tests, at least for those MOSs which seem heavily loaded

with perceptual-motor activities. More recently, the Board for Dynamic Training (the Gorman Board) found that "there exists a 'Crisis of Confidence' within the professional NCO corps, especially among junior sergeants. NCO's in units are resentful of the centralized 'system' that administers tests annually to see if they should be promoted, retained, or eliminated from the Army, yet offers no substantive help to them in preparing for the all-important MOS test."(1) The Gorman Board recommended the establishment of the Combat Arms Training Board which, among other tasks, would "monitor the development of meaningful MOS tests for key combat arms MOSs, to include promulgation of appropriate materials to permit better preparation for the tests."(1)

The paper and pencil tests employed by the enlisted personnel management system usually are criticized because of two salient observations about the tests:

- The content of many of the test items has no apparent relationship to the known skill and knowledge requirements of MOS duty positions.
- Persons who do well on a MOS test sometimes are known to be poor performers in the field, and vice versa.

EEC-developed tests are criticized by professional psychologists primarily because:

- They are seldom based on a systematic study of MOS job requirements.

- For many MOSs, especially those heavily loaded with perceptual-motor tasks, research has shown that the EEC tests have a low or insignificant validity when compared with a work-related proficiency test.

Why then is the enlisted personnel evaluation system still heavily dependent on the use of paper and pencil tests? The answer to this question is well known and to a certain extent is reasonable. It is well known that relative to performance-based testing, paper and pencil tests are inexpensive to develop and administer. Furthermore, paper and pencil tests are much easier to administratively control and to score.

How can the current state of the art in training system development contribute to solving the proficiency testing problem? A number of behavioral taxonomies have been developed for classifying tasks for the purpose of identifying which tasks are best taught by various training techniques and procedures. The same or similar taxonomies can be used for estimating the degree to which task proficiency can be validly measured by means of various testing techniques and procedures. As examples, tasks can be grossly categorized:

- (a) On a cognitive/perceptual-motor dimension.
- (b) On a dimension which expresses the degree to which the environment, important stimuli, and response options associated with a task, can be faithfully simulated via testing environments.
- (c) On a dimension which describes the degree to which performance required on the test item is remote from actual job performance(2)

Present evidence (3, 4, 5, 6, and 7) indicates that cognitive tasks can be simulated by print media, and many important features of perceptual-motor tasks cannot be so simulated. Also there is evidence which indicates that performance assessment "on the job" is more valid than "work-sample" tests; which in turn is more valid than assessment by "job-simulated" tests; which in turn is more valid than assessment by "job-correlated" tests. Generally speaking, paper and pencil tests are usually found to be "job-correlated" tests -- they assess some skill or knowledge related to the job but do not directly assess job-relevant behavior.

No matter what taxonomy is used to classify tasks and/or test items, one returns to the general observation that tests tend to be valid to the extent that the test directly measures the performance required in the field. With rare exceptions, this suggests that on-the-job or work-sample testing should be employed. Research evidence indicates that proficiency on tasks heavily loaded with cognitive activities can be assessed via paper and pencil tests, whereas, performance tests are required to assess perceptual-motor tasks. It must be concluded therefore that for many of the common subject areas associated with these MOSs, paper and pencil tests cannot be successfully employed to assess proficiency.

Is there a solution to the problems as described above? As of the present, there does not seem to be a completely satisfactory solution. The use of on-the-job testing or work-sample testing is too expensive at this time to adopt Army-wide. Hopefully, there is a partially acceptable solution, acceptable in the sense that a noticeable improvement in

proficiency testing can be achieved with a reasonable expenditure of funds and effort.

Many tests seem to have questionable validity because their items do not possess much content validity. The current state of the art is such that there is no reason for test items not to be content or job relevant. The analytic procedures used to systems engineer CONARC training programs should identify all relevant job duties and tasks, the conditions under which the tasks are performed, and the behavioral criteria. In addition, the techniques for analyzing tasks in terms of their enabling skills and knowledges should provide the baseline data needed to develop content-valid test items of either a pencil and paper or performance-test variety. Thus, the approach to MOS proficiency test development in this study was based on the following:

- The use of task analytic procedures to develop job inventories, job standards, and skill and knowledge information which would be used to develop job relevant test items.
- The use of a crude taxonomy to identify those tasks which can and cannot be adequately assessed using paper and pencil tests.
- Recommendations for the development of new assessment devices and procedures for those tasks judged not to be testable using paper and pencil tests. These procedures might be based on the development and use of performance tests and/or a modified Enlisted Efficiency Report (EER).

As part of the work of the Combat Army Training Board, eight combat arms MOSs have been extensively analyzed. The job requirements for these

MOSs are now known. This information served as the basis for the development of job-relevant proficiency tests in this project. It should be noted that future development of proficiency tests based on task analytic information may in itself bring about a significant improvement in the validity of these tests.

C. METHODOLOGY

1. DETERMINATION OF TASK CRITICALITY

The tasks and subtasks which comprise the three common subject areas (Land Navigation, First-Aid, and Rifles) were judged by the CATB as to their relative criticality. The Job/Task Data Forms (containing subtasks, job conditions, standards, knowledges, skills, and attitudes) developed by the CATB for each common subject area were used as the basic source of information in the rating forms. Figure 1 contains an illustration of a Job/Task Data Form.

Criticality Scale. A four-point criticality scale was developed by the CATB with the assistance of HumRRO to be used for making criticality ratings. This scale, along with its instructions, is presented below. The form on which the ratings were recorded is shown in Figure 2.

It will be your job to judge the criticality of each task. The key question to keep in mind is: How critical is this task to the accomplishment of the mission of a soldier with a _____ MOS, at each skill level?

The scale you are to use is as follows:

- 0 - Task is not relevant to the ability of a soldier to survive or to accomplish his individual duties as a member of a combat arms unit.

- 1 - Task is relevant to survival or accomplishment of individual duties but is relatively unimportant.
- 2 - Task is relevant to survival or accomplishment of duties and is considered important, but not critical to adequate performance.
- 3 - Task is critical to survival or accomplishment of individual duties as a member of a combat arms unit.

Definition of Survival

As used above, includes those tasks both preventive and after the fact that an individual performs, or assists in performing that affect his and his unit's ability to survive as a precondition to mission performance. The requirement for survival transcends the battlefield and non-battlefield environment and infers necessity to survive in a state fit to continue the mission (individual and unit), although some delay may be involved.

Definition of Not Relevant (Scale Point - 0)

Implies the ability to perform a task that could not be employed ever or only under very remote circumstances. Example 1 - the ability of a Rifleman (11B) to compute a position area survey such as is employed in a field artillery unit. Example 2 - the ability of a Cannoneer (13B) to assemble, maintain and operate a weapon not issued to any field artillery unit.

Definition of Relevant but Relatively Unimportant (Scale Point - 1)

Implies the ability to perform a task which could be useful but not essential. Example 1 - the ability of a Rifleman (11B) to send and receive Morse code or to tie three dozen knots in a running cord. Example 2 - the ability of a Cannoneer (13B) to name all the major muscles and/or bones in the human body, or to state the complete nomenclature and functioning of the recoil system of a given howitzer.

Definition of Relevant and Important but Not Critical
(Scale Point - 2)

Implies the ability to perform a task that would definitely enhance, under reasonable circumstances, the individual's survivability or the accomplishment of his mission. Example 1 - the ability of a Platoon Sergeant (11B) to compute and plot firing data for a 91 mm mortar, or to lay the mortar for direction. Example 2 - the ability of a Chief of Howitzer Section to lay a howitzer for direction with the aiming circle M2.

Definition of Critical (Scale Point - 3)

Implies ability to perform a task that is critical to survival under reasonable circumstances, or to adequate accomplishment of individual mission. Example 1 - the ability of a Rifleman (11B) to engage targets effectively with his rifle. Example 2 - the ability of a radio telephone operator to use the CEOI. Example 3 - the ability of any combat arms soldier to administer artificial respiration.

For each major task or subtask, you are to judge its criticality and enter the number (0-3) which reflects that judgment in the boxes provided on the right side of the form. You will notice that there are three columns, each relating to a different skill level (10, 20, and 40). The judgments that you make should reflect the criticality of a task at each specific skill level for that MOS. Thus, some tasks which are critical (3) for a 40-skill level individual, may be unimportant (1) for a person at the 10 level, or vice versa. If you wish more information about each task, you may refer to the Job/Task Data Forms while you are rating the tasks.

Committees were set up by CATB from each of the Combat Arms Branches to rate the criticality of the major tasks. Following these ratings, the tasks judged critical (given a 3 on the criticality scale) were re-rated. In this second session the committee judged the importance of the task

Figure 1. Job/Task Data Form.

01	Category	First-Aid
001	Task	Evaluate a casualty breathing and heartbeat.
	Subtask	Same
Job Conditions	<ol style="list-style-type: none"> 1. Level of performance is not a factor in identifying the job task conditions of this task. 2. Evaluation of casualty breathing and heartbeat is done without the aid of any special tools, equipment and clothing. 3. Evaluation of casualty is done without reference to any job aids or manuals. 	
Job Standards	<ol style="list-style-type: none"> 1. Position incumbent correctly determines the rate of the casualty's breathing and heartbeat. 	
Skills		Remarks
S 01	Be able to take casualty's pulse.	
S 02	Be able to determine if casualty is breathing.	
S 03	Be able to check for nerve responses.	
S 04	Be able to make decision on the probability of reviving or treating casualty.	
Knowledges		
K 01	Know the proper places to take a casualty's pulse.	
K 02	Know the proper method to take a casualty's pulse.	
K 03	Know that if a casualty goes without breathing and/or a heartbeat for more than two minutes death or irreparable brain damage results.	
Attitudes		
A 01	Aware that immediate and expedient action may be necessary to save casualty's life.	
A 02	Aware that in multiple casualty situations that those casualties which have a chance for survival must be treated first.	

Figure 2. Criticality Rating Form

		MOS _____	Skill Level		
Code	Task Statement		10	20	40
03.019	Navigate from one point on the ground to another with the aid of a topographic map.				
03.020	Navigate from one point on the ground to another with the aid of a pictomap.				
03.021	Navigate from one point on the ground to another with the aid of a strip map.				
03.022	Navigate from one point on the ground to another using the deliberate offset method.				
03.023	Navigate from one point on the ground to another using expedient methods to determine direction and distance.				
03.024	By-pass obstacles by moving at right angles for specified distances.				
03.025	Evaluate terrain using an aerial photo as a supplement to a topographic map/pictomap.				
03.026	Maintain orientation while in a moving air, ground or water vehicle by comparing terrain features visible from the vehicle with those shown on the map.				
03.027	Determine the elevation of a point on the ground using a map.				
03.028	Determine degree of slope of terrain using a map.				
03.029	Prepare a map overlay.				
03.030	Prepare a strip map (road sketch).				
03.031	Prepare a sketch map (area sketch).				
03.032	Inspect a compass for serviceability.				
03.033	Locate position on ground using aircraft overhead.				
03.034	Measure a grid azimuth using an M2 compass.				
03.035	Determine firing data using a map as a firing chart.				
03.036	Prepare a visibility diagram.				

components (subtasks, skills, and knowledges) to the performance of the overall task. As a result of these judgments, the baseline competencies (i.e., those behaviors, skills, and knowledges considered highly critical for each subject area) were listed, broken out by skill level wherever possible. Thus, although some tasks and their components were highly critical for individuals at skill level 40, the same tasks and their components may not have been considered critical for individuals with the same MOS at a 10 skill level. A summary of the importance ratings by skill level for each critical task and task component is found in Attachments 1a, 1b, and 1c (in column labeled "Critical at Skill Level").

2. DETERMINATION OF APPROPRIATE TESTING METHODS

The tasks and task components considered critical by the CATB were then judged by HumRRO researchers as to how well they might be measured by a paper and pencil test. A simple five-point classification scheme was used to rate each task/task component on the degree to which it was reasonable to develop and use paper and pencil test items. This scale and the instructions that accompanied it are presented on the following pages. Figure 3 contains an illustration of the rating form employed.

Figure 3. Assessability Rating Form

03.001.001 Measure a magnetic azimuth with a lensatic compass

<u>Task Component</u>	<u>Judgment</u>	<u>Comments</u>
03.001.001.S01		
03.001.001.S02		
03.001.001.S03		
03.001.001.K01		
03.001.001.K02		
03.001.001.K03		
03.001.001.K04		
03.001.001.K05		
03.001.001.K06		
03.001.001.K07		
03.001.001.K08		
03.001.001.K09		
03.001.001.K10		
03.001.001.A01		
03.001.001.A02		

You are to make judgments regarding the feasibility of using paper and pencil test items to assess proficiency on the task components listed in the Job/Task Data Forms. Each task component is coded as follows:

<u>Subject area</u>	<u>Subtask (if any)</u>
↘ X X . X X X . X X X . X X X	↓ X X X . X X X
↑ <u>Major task</u>	↑ <u>Component (Skill, Knowledge, Attitude)</u>

Study the job conditions and standards for each task before making your judgments. These are also found on the Job/Task Data Forms. The code numbers for a task and its components are presented on each page of this form (one task per page).

The judgment to be made is: In your opinion, can proficiency on this task component be adequately assessed by means of paper and pencil test items? The scale you are to use in making your judgments is as follows:

- 4 - Yes.
- 3 - Maybe, if appropriate additional material (e.g., job aids) are provided during testing.
- 2 - No, but some other paper and pencil instrument (questionnaire, rating scale, EER) should be used to assess proficiency on this requirement.
- 1 - No, but a reasonably practical "miniature" performance test can be developed to simulate the job conditions, and assess proficiency.
- 0 - No, only an actual field performance measure, or if not possible, a full simulation test is required.

Place the appropriate number in the column provided for your rating. Another column has been provided for you to make any comment that comes to mind as you judge each component. Such items as your recommendation for an appropriate assessment device, or the need for more information before making a judgment, should be written in the "Comments" column.

Four HumRRO researchers (this report's authors) independently judged the assessability of each of the critical tasks/task components. After completing their judgments, the researchers re-rated those tasks/task components on which there were disagreements. A disagreement was defined as a difference of two or more scale points. Thus, if a "performance test" judgment was given (0 or 1), this was not considered a disagreement. However, if a 3 and 1 were given as judgments about the same task/task component, this was considered a disagreement and these tasks/task components were judged again. Scale point 2 was given very few times as a judgment. This category was thought to be useful for "attitudes" that needed to be assessed. However, only skills and knowledges were judged in this project.

It was found that certain rating disagreements were due to ambiguities in the definitions of scale points "1" and "3". After discussions among the HumRRO researchers, these definitions were amplified to read as follows:

- 1 - a "miniature" performance test item which needs to be performed in front of an examiner, who then assesses the performance.
- 3 - a paper and pencil test item which can be answered by an individual in a group setting, as long as he has the appropriate "test aid".

Using these amplified definitions, the HumRRO researchers re-judged the tasks/task components for which there had been disagreements. Many of the disagreements were resolved. However, there remained several

items (tasks/task components) for which there still were discrepancies in the judgments of the researchers. A meeting was held during which these discrepancies were discussed and resolved when possible. It was determined that the basic cause of the disagreements came from the wording in the Job/Task Data Forms. For example, the group disagreed on "organizing" skills (i.e., "Being able to organize a target detection range for operation"). The question was whether this was a unitary skill, or a complex skill which could be further subdivided. Both a planning aspect to this skill, as well as a "setting-up" aspect could be subsumed under the overall statement. In this instance, each aspect would receive different judgments from the HumRRO raters.

In other tasks, the component knowledges could not be clearly separated from the skills to which they refer. For example, "Know the techniques of inserting a loaded magazine and chambering a round". Can an individual "know" a method/technique/procedure apart from performing the activity? To eliminate confusion it is recommended that the word "knowledge" or "know" not be used with such terms as "technique" or "procedures". In a similar vein, "know how to apply ..." should not be part of knowledge items. Rather, the application of knowledge should be considered a skill. To classify tasks and task components adequately and efficiently, it is felt that a glossary of terms is needed. Words such as "organize", "know", "knowledge", "skill", etc. must be defined and agreed to, prior to engaging in these or similar judgmental activities.

The listings of critical tasks/task components and the assessability judgments made by HumRRO researchers is shown in Attachment 1. These assessability judgments are shown for each of the subject areas (First Aid - 1a, Rifles - 1b, Land Navigation - 1c). The entries in the columns are the number of individuals who judged each task/task component to be testable by the various categories presented in the assessability scale. It represents the final consensus of opinion by the judges on this rating scale.

As a result of these rating activities a set of competencies judged highly critical and assessable by paper and pencil tests was identified. However, there were a significant number of highly critical tasks for which paper and pencil tests were judged unsuitable. These tasks and task components were reviewed jointly by CATB and HumRRO. Decisions were made regarding whether or not test items should be prepared for such tasks/task components. Also, there were many task components in the Land Navigation subject area which were appropriate for paper and pencil tests provided that certain test aids were available at the testing sites (protractors, maps, straight edges, grid coordinate scales, and compasses). An agreement was reached between CATB and HumRRO personnel that all test aids except compasses would be available.

3. PAPER AND PENCIL TEST DEVELOPMENT.

With the assistance of Subject Matter Experts (SMEs) arranged for by CATB, HumRRO researchers developed paper and pencil test items for the highly critical tasks in each common subject area. The items were

developed for those tasks/task components which were judged by HumRRO researchers to be assessible by paper and pencil tests. (See list in Attachment 2). HumRRO personnel became familiar with these subject areas by an intensive examination of the relevant FMs and other training materials. Sample paper and pencil test items relating to several task components were prepared. These were presented to the SMEs for their evaluation before further test items were developed.

Additionally, the SMEs together with the test developers, reviewed the task component assessibility ratings, and the SMEs suggested changes, additions, and deletions in terms of criticality and importance. These judgments were based solely upon documented information found in the FMS. Knowledges or skills originally on the critical task/task component list but not in the FMs were deleted and test items were never developed for them. Following the suggestions of the SMEs, changes in wording of some task components were made, or other task components were added to the list; but no major tasks were added or deleted.

A five-alternative multiple choice format was selected for the purpose of test item construction. For each question, the correct answer was randomly arranged with four distractors. In each case the stem of the question was worded in a way such that together with the right response there was a direct relationship to the component knowledge being tapped.

The reading level for these test items was to be at the sixth grade level or below. The Automated Readability Index (8) was used as the

formula for calculating reading grade level of the test items. This formula is as follows:

Automated Readability Index

- 2 Factors -- (1) word length -- strokes/word
(2) sentence length -- words/sentence

$$\text{Grade Level} = .5 (\text{average sentence length}) + 4.71 (\text{average word length}) - 21.43$$

HumRRO personnel prepared a pool of test items in each subject area. Certain items requiring photographs, or specific expertise were given to the SMEs to develop. The SMEs also provided the additional training materials, references, test aids, etc. that were required in test item development.

Each test item was coded as to the baseline competency with which it is associated (the Job/Task Data Form code for common subject areas, tasks, subtasks, skills, and knowledges). In this way the test item can be quickly referenced to the task/task component from which it was derived. Secondly, the criterion performance test requirements can also be coded in a similar manner for rapid cross-referencing. This coding scheme could eventually lead to a computer listing of all test items thereby permitting rapid construction of MOS proficiency tests. In some instances more than one test item was constructed to cover a given task component. In other cases, one test item could be used to assess more than one task component. The items are coded accordingly. Sufficient numbers of test items were developed to permit the production of

alternate test forms.¹ Initially, however, all test items in a subject area were considered to be part of the same test. In addition, each test covered items related to all applicable skill levels within the MOSs.

The resulting pool of test items in each subject area were transmitted to the SMEs. They reviewed and critiqued each of the paper and pencil test items. They checked the response alternatives for accuracy, frequency of occurrence in the field, and for reasonableness as responses. In the next meeting between HumRRO personnel and SMEs, any errors were corrected. Final versions of each test item were prepared and organized into draft versions of the tests.

The three paper and pencil tests (one in each subject area) were tried out with a small group of Ss at HumRRO. This was to gauge the comprehension of the items and to clarify the instructions required for test administration purposes. In addition, the timing necessary for test administration was determined in this initial tryout. The final versions of the paper and pencil tests are shown in Attachment 3 (Instructions - 3a, First Aid - 3b, Rifles - 3c, Land Navigation - 3d).

In many of the Land Navigation tasks, the paper and pencil test items assess the same requirements as does the related criterion performance test. The only thing that is different is the environment in which the individual performs the task. Thus, it is expected that many of the Land

¹ In constructing MOS proficiency tests, it is recommended that one uses the paper and pencil test items for all the components associated with a given critical task rather than sampling from several different tasks.

Navigation test items should have a high degree of validity when compared with the performance test criteria. This would not necessarily be the case in the Rifles and First Aid subject areas.

4. CRITERION PERFORMANCE TEST DEVELOPMENT

In order to validate the paper and pencil tests an actual performance measure will be used as a criterion. This test consists of those highly critical tasks which were selected for assessment by CATB and HumRRO. Subject matter experts were contacted to determine the availability of performance test items that could be incorporated in this criterion examination. Other items were prepared by HumRRO personnel, who organized the test and identified the support requirements for administering it at Fort Benning. The proposed performance tests are shown in Attachment 4. In addition to each of the performance test items, the support requirements and scoring guidance for each test are presented by subject area (First Aid - 4a, Rifles - 4b, Land Navigation - 4c).

5. VALIDATION PLAN

If funding becomes available to complete this project, the paper and pencil test items need to be validated. The procedures employed in this study to make paper and pencil test items as job relevant as possible, can thus be evaluated. The following activities should occur in this evaluation.

a. Administer Paper and Pencil Tests

Approximately 50 Ss are required at skill level 10, 40 Ss at skill level 20, and 30 Ss at the 40 skill level; an N of 120 is anticipated. Although it would be desirable to assess a sample of personnel

from each of the eight combat arms MOSs, this is not critical as the test items of interest are in the common subject areas. A minimum of two weeks advance notice would need to be given to CATB, USAIS, USAIC, and HumRRO Division No. 4 personnel to obtain Ss for testing and to arrange for testing facilities. The three paper and pencil tests would be administered in one session by HumRRO personnel. Approximately three hours would be required to administer the tests.

b. Conduct Criterion Performance Tests

As currently conceived, the performance tests need to be tried out on a few Ss to determine the comprehensibility of instructions and to clear up administrative procedures. Additional Land Navigation tests need to be prepared. Arrangements would then have to be made for all testing requirements (e.g., test stations, equipment, administrative personnel, Ss, etc.). It is estimated that it would take at least two full days to administer such a test on an individual basis.

Within two weeks following the paper and pencil test administration, CATB and Division No. 4 personnel would make arrangements for conducting the criterion performance test. The same Ss who participated in the paper and pencil test are to take part in the performance examination. Testing facilities would have to be set up, and Army personnel under HumRRO supervision would administer the test.

c. Obtain Comparable EEC Proficiency Test Results

In order to evaluate the effectiveness of the paper and pencil test items to assess performance, a comparison should be made with EEC

proficiency test items. In this way, the merits of the approach taken to develop the CATB/HumRRO tests can be judged, as compared to the methods used to develop EEC tests. The CATB needs to obtain the most recent EEC test results for each S taking part in the validation study. The scores to be used should reflect only those items which are associated with the three common subject areas. If this is not possible due to an insufficient number of relevant items, the Combat Arms Schools would be contacted to obtain the entire set of test questions, in the three subject areas, submitted to EEC. These questions would then be incorporated in the HumRRO paper and pencil tests. Scores on these items and scores on the HumRRO developed items would be correlated with criterion performance scores to determine concurrent validities.

d. Determine Concurrent Validities

The data collected in the testing sessions would be analyzed by means of correlational and regression analyses to determine:

- (a) the relationship between EEC test item scores and performance test scores
- (b) the relationship between HumRRO test item scores and performance test scores.

These concurrent validity coefficients would be examined to see if they are of "practical" significance for group tests. These coefficients would be obtained by subject area and skill level. Comparisons could then be made between the EEC and HumRRO test validities to evaluate the approach taken in this project.

LITERATURE CITED

1. Board for Dynamic Training: Final Report, December 1971.
2. Glaser, Robert, and Klaus, David J. "Proficiency Measurement: Assessing Human Performance," in Psychological Principle in System Development, R. M. Gagne (ed.), Holt, Rinehart and Winston, Inc., New York, 1962.
3. Engel, John D. Development of a Work Sample Criterion for General Vehicle Mechanic, HumRRO Technical Report 70-11, July 1970.
4. Engel, John D. An Approach to Standardizing Human Performance Assessment, HumRRO Professional Paper 26-70, October 1970.
5. Engel, John D., and Rehder, Robert J. A Comparison of Correlated-Job and Work-Sample Measures for General Vehicle Repairman, HumRRO Technical Report 70-16, October 1970.
6. Miller, E. E. A Taxonomy of Response Processes, HumRRO Technical Report 69-16, September 1969.
7. Osborn, William C. An Approach to the Development of Synthetic Performance Tests for Use in Training Evaluation, HumRRO Professional Paper 30-70, December 1970.
8. Kincaid, J. Peter "Making Technical Writing Readable (The Fog Count and an Alternative)", Human Factors Society Bulletin, vol. XV, no. 5, May 1972.

- 24 -

ATTACHMENTS

ATTACHMENT 1a

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumPRO Assessability Judgments - 4 Rate			Other Form
		Paper & Pencil Test w/o Aids	Perf. Test "Mini" Field	Test Field	
FIRST AID					
01.005	10, 20, 40				
01.005.S02	10, 20, 40		3	1	
01.005.S03	10, 20, 40		2	2	
01.005.K03	10, 20, 40	4			
01.005.K06	10, 20, 40	4			
01.005.K07	10, 20, 40	4			
01.006	10, 20, 40				
01.006.S01	10, 20, 40		4		
01.006.K01	10, 20, 40	4			
01.006.K02	10, 20, 40	4			

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	HumRRO Assessability Judgments - 4 Rater			
	Critical At Skill Level	Paper & Pencil Test w/o Aids	Perf. Test "Mini" Field	Other Form
01.006.K03 Know that artificial respiration can be given through the mouth or nose depending on situation.	10, 20, 40	4		
01.008 Stop bleeding of a wound.	10, 20, 40			
01.008.001 Applies pressure dressing.	10, 20, 40			
01.008.001.K03 Know how to apply a pressure dressing.	10, 20, 40	3	1	
01.008.K06 Know that the pressure dressing is the preferred method to stop bleeding.	10, 20, 40	4		
01.008.002 Applies digital pressure.	10, 20, 40			
01.008.002.S01 Be able to properly apply digital pressure.	10, 20, 40		3	1
01.008.002.K05 Know the location of pressure points on the body.	10, 20, 40	4		
01.008.002.K06 Know that pressure should be applied until pressure dressing can be unwrapped and applied.	10, 20, 40	3	1	
01.008.003 Applies a tourniquet.	10, 20, 40			
01.008.003.S01 Be able to properly apply a tourniquet.	10, 20, 40		3	1
01.008.003.K04 Know that a casualty should be marked with a "T" on his forehead.	10, 20, 40	4		

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumPRO Assessibility Judgments - 4 Rater			Other Form
		Paper & Pencil Test w/o Aids	with Aids	"Mini" Field	
01.008.003.K05 Know that a tourniquet should be loosened only by competent medical personnel	10, 20, 40	3	1		
01.008.003.K06 Know that a tourniquet should only be used as a last alternative to control bleeding.	10, 20, 40	4			
01.008.003.K07 Know that the time a tourniquet was applied should be shown on forehead of casualty.	10, 20, 40				
01.008.003.K08 Know where to apply a tourniquet.	10, 20, 40				
01.009 Protect the wound(s) of a casualty.	10, 20, 40				
01.009.S01 Be able to secure various bandages to all areas of the body.	10, 20, 40			4	
01.009.K07 Know the reasons for applying a dressing.	10, 20, 40				
01.010 Administer shock control measures to a casualty.	10, 20, 40				
01.010.K01 Know the shock control measures.	10, 20, 40	4			
01.010.K02 Know the basic position in which to place a conscious/unconscious casualty without regard to injury.	10, 20, 40	3	1		
01.012 Apply First-Aid measures for drowning. (See Tasks 5, 6, and 10)	40				

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumPRO Assessibility Judgments - 4 Rating		
		Paper & Pencil Test w/o Aids	Perf. Test "Mini" Field	Other Form
01.014	40	Know that closed chest heart massage may be required.		
01.015	40	Apply First-Aid measures for electrical shock. (See Tasks 6 and 10)		
01.016	40	Know that closed chest heart massage may be required.		
01.017	40	Apply First-Aid measures for carbon monoxide poisoning.		
01.018.K01	40	Know that closed chest heart massage may be required		
01.018.K02	40	Know the symptoms of carbon monoxide poisoning.	1	
01.018.K03	40	Know that artificial respiration is necessary if casualty is not breathing.	4	
01.019	40	Apply First-Aid measures for burns.		
01.019.001	40	Applies First-Aid measures for heat burns.		
01.019.001.K02	40	Know that persons with burns should be treated for shock.	4	
01.019.001.K03	40	Know that ointments and other medications should not be applied to burns.	4	

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumPRO Assessibility Judgments - 4 Rate		
		Paper & Pencil Test w/o Aids	Perf. Test "Mini" Field	Othe Form
01.016.001.K08 Know that blisters should not be opened.	40	4		
01.016.001.K10 Know that clothing stuck to a burn should not be pulled off burned area.	40	4		
01.016.001.K11 Know that burns should be dressed with sterile dressing if available otherwise use cleanest material available.	40	4		
01.016.011.K13 Know that victims of burns may need to be given cool salt and soda.	40	4		
01.016.002 Apply First-Aid measures for chemical burns.	40			
01.016.002.K02 Know that persons with burns should be treated for shock.	40	4		
01.016.002.K03 Know that blisters should not be opened.	40	4		
01.016.002.K04 Know that chemicals in contact with skin/clothing should be flushed with water.	40	4		
01.016.002.K05 Know that some burning chemical may have to be picked out of skin with a knife.	40	4		
01.016.002.K08 Know that you must smother the flame of white phosphorous fire.	40			
01.022 Apply First-Aid measures for heatstroke.	40			
01.022.K01 Know the symptoms for heatstroke.	40	3	1	

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumRO Assessibility Judgments #4 Rate			
		Paper & Pencil Test w/o Aids	with Aids	Perf. Test "Mini" Field	Other Form
01.022.K04 Know that heatstroke can cause death or permanent disability.	40	4			
01.022.K06 Know that the longer a casualty remains overheated the more likely he is to die.	40	4			
01.022.K07 Know that casualty should not be given any stimulants or hot drinks.	40	4			
01.022.K08 Know that medical attention should be given as soon as possible.	40	4			
01.029 Apply First-Aid measures for a sucking chest wound.	40				
01.029.K01 Know that a sucking chest wound will cause the lungs to collapse if not treated	40	3	1		
01.029.K02 Know the First-Aid procedures for a sucking chest wound.	40	3	1		
01.029.K04 Know that the four life saving measures should be applied.	40	3	1		
01.029.K05 Know that the casualty should be placed in a position where he breathes easily.	40	3	1		
01.029.K07 Know that a casualty will be more comfortable on his injured side.	40				

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATE

Task/Task Component Statement	Critical At Skill Level	HumRRO Assessability Judgments - 4 Rater		
		Paper & Pencil Test w/o Aids	Perf. Test "Mini" Field	Other Form
01.031 <u>Apply First-Aid measures for a belly wound.</u>	40			
01.031.K01 Know that medical attention is required at once.	40	4		
01.031.K02 Know that casualty should be kept on his back.	40	4		
01.031.K04 Know that internal bleeding can not be effectively controlled in the field.	40	4		
01.031.K05 Know that the wound should be covered with sterile dressing.	40	3	1	
01.031.K06 Know that casualty should not be given anything to drink or eat.	40	4		
01.031.K07 Know that treatment for shock is an important step in treatment of belly wounds.	40	4		
01.031.K08 Know that casualty may have another hole/injury where projectile penetrated/emerged.	40	4		

ATTACHMENT 1b

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumPRO Assessibility Judgments - 4 Rater			
		Paper & Pencil Test w/o Aids	Perf. Test "Mini" Field	Test Other Form	
RIFLES					
15.001 <u>Disassemble/assemble on M16A1 rifle.</u>	10, 20, 40				
15.001.S01 Be able to remove from an M16 rifle each part the user is authorized to remove.	10, 20, 40		4		
15.001.S02 Be able to replace parts on an M16 rifle.	10, 20, 40		4		
15.001.S03 Be able to determine parts (that a user is authorized to disassemble on an M16 rifle) that should be replaced or cleaned.	10, 20, 40		3	1	
15.001.K01 Know the extent to which the user is authorized to disassemble an M16 rifle.	10, 20, 40	4			
15.002 <u>Perform functioning check on M16A1 rifle.</u>	10, 20, 40				
15.002.S01 Be able to perform the steps involved with making a functioning check on the rifle.	10, 20, 40		4		
15.002.K01 Know cycle of functioning of an M16A1 rifle.	20, 40	3	1		
15.002.K02 Know the limits of a functioning check.	20, 40	3	1		
15.003 <u>Service an M16A1 rifle.</u>	10, 20, 40				
15.003.S01 Be able to disassemble/assemble the M16A1 rifle.	10, 20, 40		3	1	

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumPRO Assessibility Judgments -4 Rater			
		Paper & Pencil Test w/o Aids	Perf. Test "Mini" Field	Test Field	Other Form
15.003.S02 Be able to use the prescribed tools and lubricants or field expedients to service the M16A1 rifle.	10, 20, 40		3	1	
15.003.K03 Know parts of rifle to be lubricated.	10, 20, 40	2			
15.003.K05 Know procedure for replacement of unserviceable parts.	40	3	1		
15.003.K06 Know field expedient means for servicing the rifle.	40	4			
15.004 Service an M16A1 magazine.	40				
15.004.K03 Know parts of magazine to be lubricated.	40	2			
15.006 Load/unload an M16A1 rifle magazine.	10, 20, 40				
15.006.S01 Be able to load magazine without the loading strip and charger.	10, 20, 40		3	1	
15.006.S02 Be able to load magazine with the loading strip and charger.	10, 20, 40				
15.006.S03 Be able to unload the magazine.	10, 20, 40		3	1	
15.006.K01 Know capacity of magazine.	10, 20, 40	4			
15.007 Load/unload/clear an M16A1 rifle.	10, 20, 40				
15.007.S01 Be able to load an M16A1 rifle.	10, 20, 40		3	1	

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumPRO Assessibility Judgments - 4 Raters			
		Paper & Pencil Test w/o Aids	Perf. Test "Mini" Field	Test Field	Other Form
15.007.S02 Be able to unload an M16A1 rifle.	10, 20, 40		3	1	
15.007.S03 Be able to clear an M16A1 rifle by visual inspection.	10, 20, 40		3	1	
15.007.K02 Know the technique of inserting a loaded magazine and chambering a round.	10, 20, 40	4			
15.008.002 Conduct preparatory M16A1 rifle marksman-ship training using a 25-meter range.	40				
15.008.002.S03 Be able to organize a 25-meter firing range for operation.	40			4	
15.008.001.S05 Be able to determine the sequence of instruction.	40	2			
15.008.002.S04 Be able to determine the time necessary for preparatory marksmanship training.	40	1	3		
15.008.002.S05 Be able to demonstrate the separate actions of the integrated act of rifle shooting.	40		3	1	
15.008.002.S06 Be able to demonstrate the positions used in rifle marksmanship.	40		3	1	
15.008.002.S07 Be able to organize a class for rifle marksmanship.	40			4	

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumRO Assessibility Judgments - 4 Rater			
		Paper & Pencil Test w/o Aids	Paper & Pencil Test with Aids	Perf. Test "Mini" Field	Other Form
15.008.002.S08 Be able to determine ammunition requirements to conduct marksmanship training.	40	1	3		
15.008.002.S09 Be able to supervise the techniques used by an individual to improve his accuracy.	40			3	1
15.008.002.S10 Be able to supervise the individual while battlesight zeroing his rifle.	40			3	1
15.008.002.S11 Be able to conduct a live firing range adhering to safety regulations.	40				4
15.008.002.S12 Be able to determine the objective of 25-meter firing.	40	2	2		
15.008.002.K03 Know the causes of variations in shot group patterns.	40	4			
15.008.002.K04 Know the effects of different shot group patterns as ranges to the target increase.	40	4			
15.008.002.K05 Know the importance of a good battlesight zero.	40	4			
15.008.002.K06 Know how the 25-meter range is used to obtain a 250-meter battlesight zero.	40	3	1		
15.008.002.K07 Know the procedures for sight manipulation to battlesight zero on a 25-meter range.	40	3		1	

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumRRO Assessibility Judgments - 4 Raters		
		Paper & Pencil Test w/o Aids	Perf. Test "Mini" Field	Other Form
15.008.002.K08 Know the eight steady hold factors used in the integrated act of shooting.	40	3	1	
15.008.002.K09 Know the importance of proper sight picture.	40	3	1	
15.008.002.K10 Know the importance of proper sight alinement.	40	3	1	
15.008.006 Conduct training in automatic rifle fire with an M16A1.	40			
15.008.003.S01 Be able to organize a field firing range for operation.	40			4
15.008.003.S05 Be able to control the firing of students during the conduct of a firing exercise.	40		4	
15.008.006.S01 Be able to demonstrate the application of the principles of preparatory marksmanship and how it relates to automatic rifle fire.	40		3	1
15.008.006.S03 Be able to demonstrate rapid magazine changes.	40		3	1
15.008.006.S04 Be able to conduct a live fire exercise using automatic fire.	40			4
15.008.006.K03 Know the technique for conducting an automatic fire range.	40	3	1	

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumRRO Assessibility Judgments - 4 Raters			
		Paper & Pencil Test w/o Aids	With Aids	Perf. Test "Mini" Field	Other Form
15.008.006.K05 Know the control measures used for safe conduct of automatic firing.	40	3	1		
15.009 Zero an M16A1 rifle.	10, 20, 40				
15.009.S01 Be able to make adjustments to front and rear sights on a rifle.	10, 20, 40		4		
15.009.S02 Be able to fire the rifle applying the integrated act of rifle shooting.	10, 20, 40		3	1	
15.009.S03 Be able to fire three round shot groups with accuracy.	10, 20, 40		2	2	
15.009.S04 Be able to analyze shot groups to determine the cause(s) of poor accuracy.	40		4		
15.009.S05 Be able to reduce stoppages of a rifle.	10, 20, 40		3	1	
15.009.S06 Be able to fire the rifle from the prone supported position.	10, 20, 40		3	1	
15.009.K01 Know the amount of sight adjustment necessary to move a shot group onto a target	40	2	2		
15.009.K02 Know the procedures used to zero a rifle on a 25-meter range.	40		4		

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumPRO Assessibility Judgments - 4 Raters			
		Paper & Pencil Test w/o Aids	with Aids	Perf. Test "Mini" Field	Other Form
15.009.K03 Know how the trajectory of the round varies with the line of sight at different ranges.	40	3	1		
15.010 <u>Engage in a stationary target with an M16A1 rifle.</u>	10, 20, 40				
15.010.S02 Be able to fire the rifle accurately in either the automatic or semi-automatic mode.	10, 20, 40		2	2	
15.010.S05 Be able to engage a target as a member of a team.	10, 20, 40			4	4
15.010.S06 Be able to control the fires of individuals and/or teams.	40			4	4
15.010.K01 Know the characteristics of rifle fire.	40	3	1		
15.010.K02 Know the methods of application of rifle fire to point type targets.	40	3	1		
15.010.K03 Know the methods of application of rifle fire to area type targets.	40	3	1		
15.010.K04 Know the methods of fire control.	40	4			
15.011 <u>Engage a moving target with an M16A1 rifle.</u>	10, 20, 40				

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumPRO Assessibility Judgments -4 Rater			
		Paper & Pencil Test w/o Aids	Test with Aids	Perf. Test "Mini" Field	Other Form
15.011.S02 Be able to fire the rifle accurately in either the automatic or semi-automatic mode.	10, 20, 40			2	2
15.011.S05 Be able to engage a moving target as a member of a team.	10, 20, 40				4
15.001.S06 Be able to control the fires of individual riflemen and/or teams.	40				4
15.011.S08 Be able to determine the amount of leads needed to hit a moving target.	10, 20, 40			2	2
15.011.S09 Be able to trace a moving target with a rifle.	10, 20, 40			4	
15.011.K04 Know the methods of fire control.	40	3	1		
15.012 Engage visual aerial targets with M16A1 rifle.	40				
15.012.S01 Be able to determine the range to the target.	40				
15.012.S02 Be able to fire the rifle accurately in either the automatic or semi-automatic mode.	40				
15.012.S03 Be able to select the best positions from which to engage the target.	40				

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumRO Assessibility Judgments -4 Rater		
		Paper & Pencil Test w/o Aids	Perf. Test "Mini" Field	Other Form
15.012.S04 Be able to select the best method of fire to engage the target.	40			
15.012.S05 Be able to determine the amount of leads needed to hit a moving target.	40			
15.012.S06 Be able to identify that the aerial target is an enemy aircraft.	40			
15.012.S07 Be able to control the engagement of aerial targets with rifles.	40			
15.012.S08 Be able to track an aerial target.	40			
15.012.K01 Know the options a rifleman may use for engaging an aerial target.	40			
15.012.K02 Know the control measures for engaging aerial targets.	40			
15.013 Engage a target with an M16A1 rifle during periods of limited visibility.	10, 20, 40			
15.013.S01 Be able to detect a target at night.	10, 20, 40		3	1
15.013.S02 Be able to prepare a position to fire pre-planned fires.	40		2	2
15.013.K03 Know when to fire the rifle at night.	10, 20, 40	3		1

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumRRO Assessibility Judgments - 4 Rater		
		Paper & Pencil Test w/o Aids	with Aids	Other Form
15.013.K05 Know the methods of application of fires using pre-planned fires.	10, 20, 40	4		
15.013.K06 Know the control measures and techniques used in engaging targets at night.	40	4		
15.014 Apply immediate action to reduce a stoppage of an M16A1 rifle.	10, 20, 40			
15.014.S01 Be able to perform immediate action on an M16A1 rifle.	10, 20, 40		3	1
15.014.K01 Know that immediate action will reduce most stoppages.	10, 20, 40	4		
15.014.K02 Know steps of immediate action with the rifle.	10, 20, 40	4		
15.014.K03 Know the relationship between immediate action and remedial action.	40	4		
15.015 Identify malfunctions in an M16A1 rifle.	40			
15.015.S02 Be able to disassemble/assemble the M16A1 rifle.	40		3	1
15.016 Correct malfunctions in an M16A1 rifle.	40			
15.016.S02 Be able to disassemble/assemble the M16A1 rifle.	40		3	1

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumKRO Assessibility Judgments -4 Rater		
		Paper & Pencil Test w/o Aids	Perf. Test "Mini" Field	Other Form
15.016.S04 Be able to replace malfunctioning parts of rifle.	40		3	1
15.016.K02 Know the extent to which the user can correct malfunctions on the rifle.	40	4		
15.017 Conduct target detection training.				
15.017.S01 Be able to determine what target detection training is needed.	40		1	3
15.017.S04 Be able to organize a target detection range for operation.	40		1	3
15.017.S06 Be able to determine the sequence of instruction.	40	1	3	
15.017.S11 Be able to demonstrate target detection techniques.	40		3	1
15.017.S12 Be able to detect sound, stationary, and multiple moving targets.	40		2	2
15.017.K02 Know indicators for target detection.	40	3	1	
15.017.K03 Know how to apply indicators in detecting targets.	40	4		
15.017.K04 Know how to identify indicators used in detecting each target.	40	3	1	

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumRRO Assessibility Judgments - 4 Rate			
		Paper & Pencil Test w/o Aids	with Aids	Perf. Test "Mini"	Field
15.017.K06 Know the techniques used in searching and maintaining observation of an area.	40	4			
15.018 Destroy an M16A1 rifle to prevent enemy use.	40				
15.018.S01 Be able to use explosives and incendiary grenades normally available to a unit.	40		2	2	
15.018.S02 Be able to use field expedient methods of destroying the rifle.	40		3	1	

ATTACHMENT 1c

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumPRO Assessibility Judgments -4 Rater		
		Paper & Pencil Test w/o Aids	with Aids	Perf. Test "Mini" Field Other Form
LAND NAVIGATION				
03.001	20, 40			
<u>Measure a magnetic azimuth with a compass.</u>				
03.001.001	20, 40			
<u>Measure a magnetic azimuth with a lensatic compass.</u>				
03.001.001.S01	20, 40		4	
Be able to use the center hold method to read azimuths on a compass.				
03.001.001.K01	20, 40		2	
Know that the compass must be held level and firm when sighting on an objective and reading an azimuth.				
03.001.001.K04	20, 40		4	
Know that proximity to metal affects the reliability of a compass.				
03.001.001.K07	20, 40		3	1
Know how to read the degree scale on a compass.				
03.001.002	20, 40			
<u>Measure a magnetic azimuth with an M2 compass.</u>				
03.001.001.K01.			2	2
03.001.001.K04.			4	
03.001.002.K01	20, 40		2	2
Know how to interpret the mil scale on an M2 compass.				
03.002	40			
<u>Measure an azimuth on a map with a protractor.</u>				

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumRRO Assessibility Judgments - 4 Rater:		
		Paper & Pencil Test w/o Aids	Perf. Test "Mini" Field	Other Form
03.002.S01 Be able to orient the protractor on the map to accurately measure the angle.	40	4		
03.002.S02 Be able to read the exact number of degrees or mils of the angle between the grid line and the direction line.	40	4		
03.002.K04 Know the techniques of orienting a protractor to read azimuths.	40	1	3	
03.002.K05 Know that an azimuth is measured in a clockwise direction from Grid North.	40	4		
03.003 Compute the back azimuth of an azimuth.	40			
03.003.K01 Know that the back azimuth of a line differs from the azimuth by exactly 180 degrees or 3200 mils.	40	4		
03.003.K02 Know that if the azimuth is less than 180 degrees the back azimuth is the value of the azimuth plus 180 degrees or 3200 mils.	40	4		
03.003.K03 Know that if the azimuth is 180 degrees or 3200 mils or more the back azimuth is the value of the azimuth minus 180 degrees or 3200 mils.	40	4		
03.004 Convert a magnetic azimuth to a grid azimuth using the map's declination diagram.	40			
03.002.K06 Know the difference between true magnetic and grid azimuth.	40	4		

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumRRO Assessability Judgments - 4 Rater		
		Paper & Pencil Test w/o Aids	Perf. Test "Mini" Field	Other Form
03.004.S01 Be able to determine the G-M angle from the map's declination diagram.	40	4		
03.004.S02 Be able to convert a magnetic azimuth to a grid azimuth when working with a map having an east G-M angle.	40	4		
03.004.S03 Be able to convert a magnetic azimuth to a grid azimuth when working with a map having a west G-M angle.	40	4		
03.004.S04 Be able to convert a magnetic azimuth to a grid azimuth when the G-M angle is greater than the magnetic azimuth.	40	4		
03.004.S05 Be able to measure a magnetic azimuth.	40	1	3	
03.004.K02 Know the angular relationship among the three directions is found in the declination diagram.	40	2		
03.004.K03 Know that in order to plot a magnetic azimuth on a map it must first be converted to a grid azimuth.	40	4		
03.005 Convert a grid azimuth to a magnetic azimuth using the map's declination diagram.	40			
03.005.S01 Be able to determine the G-M angle from the map's declination diagram.	40	4		
03.005.S02 Be able to convert a grid azimuth to a magnetic azimuth when working with a map having an east G-M angle.	40	4		

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumPRO Assessibility Judgments - 4 Rater			Other Form
		Paper & Pencil Test w/o Aids	with Aids	Perf. Test "Mini" Field	
03.005.S03 Be able to convert a grid azimuth to a magnetic azimuth when working with a map having a west G-M angle.	40		4		
03.005.S04 Be able to convert a grid azimuth to magnetic azimuth when the G-M angle is greater than the grid azimuth.	40		4		
03.005.K02 Know the angular relationship among the three directions is found in the declination diagram.	40	4			
03.005.K03 Know that in order to use a grid azimuth in the field with a lensatic compass it must first be changed to a magnetic azimuth.	40	3	1		
03.006 Measure ground distance on a map.	20, 40				
03.006.S01 Be able to measure straight-line ground distance on a map.	20, 40		4		
03.006.S02 Be able to measure road distance on a map.	20, 40		4		
03.006.S03 Be able to convert ground distance on a map to miles, meters, or yards, if necessary.	20, 40		4		
03.006.K01 Know the technique of using a straightedge to measure straight-line distances on the map.	20, 40	1	3		
03.006.K02 Know the technique of using a straightedge to measure road distance on the map.	20, 40	1	3		

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumRRO Assessibility Judgments - 4			Other Form
		Paper & Pencil Test w/o Aids	with Aids	Perf. Test "Mini" Field	
03.009 <u>Locate a point on a map using the military grid reference system.</u>	20, 40				
03.009.S01 Be able to interpret the military grid reference system on a map.	20, 40		4		
03.009.S02 Be able to orient a grid coordinate scale on a map.	20, 40		4		
03.009.S03 Be able to locate a point on a map when given a six-digit coordinate.	20, 40		4		
03.009.S04 Be able to locate a point on a map when given an eight-digit coordinate.	20, 40		4		
03.009.S05 Be able to use the interpolation method to locate by coordinates a point on a map.	20, 40		4		
03.009.K01 Know that the designation of a point on a map is based upon the principle "read right then up."	20, 40	4			
03.009.K03 Know that grid coordinates should be pre-fixed by the grid zone designation and the 100,000 meter square identification letters.	20, 40	4			
03.009.K04 Know that the grid lines are identified by a specific number which is printed in the margin directly opposite the line it indicates.	20, 40	3	1		
03.009.K06 Know to use only the large boldfaced numbers in the margin labeling each grid line.	20, 40	2	2		

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumRRO Assessibility Judgments - 4 Rater			
		Paper & Pencil Test w/o Aids	with Aids	Perf. Test "Mini" Field	Other Form
03.009.K10 Know that coordinates are written as a continuous series of digits without any punctuation marks and that the first half of the total number of digits represents the right reading and the last half represents the up reading.	20, 40	4			
03.009.K11 Know that coordinates always consist of an even number of digits.	20, 40	4			
03.011 Orient a map using a compass.	20, 40				
03.011.S01 Be able to place a compass into operation.	20, 40			4	
03.011.S02 Be able to determine G-M angle by using the declination diagram.	20, 40		4		
03.011.S07 Be able to rotate the map with a compass oriented on it to a north south grid line until the angle formed by the needle and index line is the same size and relationship as the declination diagram.	20, 40		3	1	
03.011.K01 Know the technique of orienting a map with a declinated M2 compass.	20, 40	2	2		
03.011.K02 Know the precautions for using the compass.	20, 40	4			
03.011.K03 Know why a magnetic needle will not orient properly if the compass is not level.	20, 40	4			
03.012 Orient a map by comparing features on the map with those on the ground.	20, 40				

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumRRO Assessibility Judgments - 4 Raters		
		Paper & Pencil Test w/o Aids	Perf. Test "Mini" Field	Other Form
03.012.S01 Be able to examine the map and the ground to find features common to both.	20, 40		2	2
03.012.S02 Be able to align the feature on the map with the same feature on the ground.	20, 40		3	1
03.012.K01 Know how to recognize various terrain features on a map.	20, 40	1		
03.012.K02 Know that it is possible to use a single linear object if the map user's position is known, and know potential problem of 180° direction reversal.	20, 40	4		
03.012.K03 Know that the map may be oriented by ground features even though the map reader's position is unknown.	20, 40	4		
03.013 Determine own location on the ground by comparing terrain features visible from the location with those shown on the map.	20, 40			
03.013.S01 Be able to locate prominent landmarks on the ground, and then locate the same symbols on the map.	20, 40		1	3
03.013.S02 Be able to determine your position by terrain association from the known landmarks.	20, 40		1	3
03.013.S04 Be able to orient a map with or without a compass.	20, 40		2	2

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CAT3

Task/Task Component Statement	Critical At Skill Level	HumPRO Assessibility Judgments - 4 Rater			
		Paper & Pencil Test w/o Aids	Pencil Test with Aids	Perf. Test "Mini" Field	Other Form
03.013.K01 Know the types of terrain features on the ground and the symbols used to identify them on a map.	20, 40	3	1		
03.014 Locate an unknown point on a map or on the ground by intersection.	40				
03.014.S01 Be able to orient a map using a compass and by inspection.	40		2	2	
03.014.S02 Be able to determine an azimuth with compass and convert same to grid azimuth.	40		3	1	
03.014.S04 Be able to plot an azimuth or a direction on a map accurately.	40		1	1	1 51 1
03.014.K02 Know that intersection can be used only when the user's position is known, and a minimum of one other position is known.	40	4	2		
03.015 Locate an unknown point on a map or on the ground by resection.	40				
03.015.S01 Be able to orient a map using a compass.	40		3	1	
03.015.S02 Be able to orient a map using the inspection method.	40		2	2	
03.015.S03 Be able to measure a magnetic azimuth to a known position.	40		3	1	
03.015.S04 Be able to convert a magnetic azimuth to a grid azimuth.	40		3	1	

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumPRO Assessability Judgments - 4 Raters			
		Paper & Pencil Test w/o Aids	with Aids	Perf. Test "Mini" Field	Other Form
03.015.S05 Be able to determine a back azimuth.	40		3	1	
03.015.S06 Be able to use a protractor in conjunction with a map.	40		3	1	
03.015.S08 Be able to draw a grid azimuth on a map from the known points to the unknown point.	40			4	
03.015.K01 Know that the intersection of the lines drawn on the map is the unknown location.	40	4			
03.015.K03 Know that the location of at least two ground terrain features must be known in order to conduct resection.	40	4			
03.017 Select a movement route using a map.	40				
03.017.S01 Be able to read coordinates and interpret features on a military map.	40		4		
03.017.S03 Be able to determine by inspection if terrain is negotiable for the mode of travel to be used.	40		4		
03.017.K01 Know the capabilities and limitations of the type of transportation to be used (if any).	40	4			
03.018 Navigate from one point on the ground to another with the aid of a compass.	20, 40				
03.018.S02 Be able to read a compass that has an azimuth present.	20, 40		4		

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumPRO Assessibility Judgments - 4 Rate			Other Form
		Paper & Pencil Test w/o Aids	with Aids	"Mini" Perf. Test Field	
03.018.S04 Be able to select steering marks on the ground in the direction of travel.	20, 40			2	2
03.018.K04 Know that metallic objects, e.g., helmet, rifle, etc., will alter the magnetic needle of the compass.	20, 40		4		
03.019 <u>Navigate from one point on the ground to another with the aid of a topographic map.</u>	20, 40				
03.019.S01 Be able to associate locations on the map to the ground and vice versa.	20, 40			3	1
03.019.S03 Be able to plan route through a map reconnaissance.	20, 40				
03.019.S04 Be able to determine elevation and relief.	20, 40		3	1	
03.019.S05 Be able to confirm location at objective by using map association.	20, 40			2	2
03.019.K01 Know the basic terrain features depicted on a map.	20, 40		2	2	
03.019.K02 Know the basic colors of a map and what they depict.	20, 40		2	2	
03.021 <u>Navigate from one point on the ground to another with the aid of a strip map.</u>	40				
03.021.S01 Be able to associate locations on the strip map to the ground and vice versa.	40			3	1

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumPRO Assessibility Judgments - 4 Rater			
		Paper & Pencil Test w/o Aids	with Aids	Perf. Test "Mini" Field	Other Form
03.021.S03 Be able to confirm location at the objective by using a strip map.	40			2	2
03.021.S04 Be able to identify and recognize strip map symbols.	40		4		
03.024 Bypass obstacles by moving at right angles for specified distances.	20, 40				
03.024.S01 Be able to preset a desired azimuth on a compass using the bezel ring.	20, 40				
03.024.S02 Be able to read a compass that has an azimuth preset on it.	20, 40				
03.024.S03 Be able to use the center hold method to determine direction for movement.	20, 40				
03.024.S04 Be able to select steering marks on the ground in the direction of travel.	20, 40				
03.024.S05 Be able to measure distance while moving on foot from one point to another.	20, 40				
03.024.S06 Be able to record the azimuths and distances moved.	20, 40				
03.024.S07 Be able to determine the azimuths necessary to bypass an obstacle.	20, 40				
03.024.K01 Know that the legs of the detour must be equal in distance in order to remain on the same course after the bypass of the obstacle.	20, 40				

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

HumPRO Assessibility Judgments - 4 Rater

Task/Task Component Statement	Critical At Skill Level	Paper & Pencil Test			Perf. Test		Other Form
		w/o Aids	with Aids	"Mini"	Field		
03.024.K02 Know that adding 90 degrees to the compass direction will be a right turn at a right angle.	20, 40						
03.024.K03 Know that subtracting 90 degrees from the compass direction will be a left turn at a right angle.	20, 40						
03.024.K04 Know the advantages and disadvantages of using the detour method to detour obstacles in comparison with other methods.	20, 40						
03.024.K05 Know that at night, when the compass is preset, a 90 degree turn right or left will cause the luminous E or W, respectively, to fall below the long luminous line.	20, 40						
03.026 Maintain orientation while in a moving air, ground or water vehicle by comparing terrain features visible from the vehicle with those shown on the map.	40						
03.026.S01 Be able to mark prominent terrain features on a map that can be used to maintain orientation while moving.	40			3	1		
03.026.S03 Be able to select steering marks when navigating in a vehicle.	40			2	2		
03.027 Determine the elevation of a point on the ground using a map.	40						
03.027.S01 Be able to locate a point on the map given the coordinates.	40		4				

ASSESSIBILITY OF TASKS/TASK COMPONENTS JUDGED CRITICAL BY CATB

Task/Task Component Statement	Critical At Skill Level	HumRRO Assessability Judgments - 4 Rate			
		Paper & Pencil Test w/o Aids	with Aids	Perf. Test "Mini" Field	Othe Form
03.027.S02 Be able to locate the numbered contour line nearest the point for which the elevation is desired.	40		4		
03.027.S03 Be able to determine the elevation by counting upward from the highest numbered contour line and interpolating the distance from the last contour to the desired point.	40		4		
03.027.K01 Know where to find the contour interval on a map.	40	3	1		
03.027.K02 Know that contours are represented by brown colored lines.	40	4			
03.027.K04 Know the technique for reading and interpreting contour lines.	40	3	1		
03.028 Determine degree of slope of terrain using a map.	40				
03.028.S02 Be able to compute the percentage of slopes.	40	1	3		
03.028.K02 Know that the formula $\frac{VD \text{ (Vertical Distance)} \times 100}{HD \text{ (Horizontal Distance)}}$ must be applied to determine the percentage of slope.	40	4			

- 57 -
ATTACHMENT 2

Critical Tasks/Subtasks Assessed by Paper and Pencil Test
Items and Performance Test Requirements

FIRST AID

- 01.005 Clear and maintain the airway of a casualty.
- 01.006 Administer artificial respiration to a casualty.
- 01.008.001 Applies pressure dressing to stop bleeding of a wound.
- 01.008.002 Applies digital pressure to stop bleeding of a wound.
- 01.008.003 Applies a tourniquet to stop bleeding of a wound.
- 01.010 Administer shock control measures to a casualty.
- 01.016.001 Applies First-Aid measures for heat burns.
- 01.016.002 Apply First-Aid measures for chemical burns.
- 01.022 Apply First-Aid measures for heatstroke.
- 01.029 Apply First-Aid measures for a sucking chest wound.
- 01.031 Apply First-Aid measures for a belly wound.

LAND NAVIGATION

- 03.001.001 Measure a magnetic azimuth with a lensatic compass.
- 03.002 Measure an azimuth on a map with a protractor.
- 03.003 Compute the back azimuth of an azimuth.
- 03.004 Convert a magnetic azimuth to a grid azimuth using the map's declination diagram.
- 03.005 Convert a grid azimuth to a magnetic azimuth using the map's declination diagram.
- 03.006 Measure ground distance on a map.
- 03.009 Locate a point on a map using the military grid reference system.
- 03.011 Orient a map using a compass.

03.012 Orient a map by comparing features on the map with those on the ground.

03.013 Determine own location on the ground by comparing terrain features visible from the location with those shown on the map.

03.014 Locate an unknown point on a map or on the ground by intersection.

03.015 Locate an unknown point on a map or on the ground by resection.

03.024 Bypass obstacles by moving at right angles for specified distances.

03.027 Determine the elevation of a point on the ground using a map.

03.028 Determine degree of slope of terrain using a map.

RIFLES

15.001 Disassemble/assemble an M16A1 rifle.

15.002 Perform functioning check on M16A1 rifle.

15.003 Service an M16A1 rifle.

15.008.002 Conduct preparatory M16A1 rifle marksmanship training using a 25-meter range.

15.009 Zero an M16A1 rifle.

15.010 Engage a stationary target with an M16A1 rifle.

15.014 Apply immediate action to reduce a stoppage of an M16A1 rifle.

15.015 Identify malfunctions in an M16A1 rifle.

15.017 Conduct target detection training.

ATTACHMENT 3a

PAPER AND PENCIL TEST ADMINISTRATION INSTRUCTIONS

INTRODUCTION

My name is _____. I will be giving you the tests this morning (afternoon). Please read to yourself the instructions on the first page of your test booklet while I read them aloud.

DIRECTIONS

Print your name, MOS, and unit on your test booklet.

The purpose of these tests is to find out how well you know three of the required subject areas of your MOS. These subject areas are common to 8 Combat Arms MOSs. These tests have been developed in order to try to improve upon the present MOS proficiency tests which are prepared by the Enlisted Evaluation Center. We believe that performance on these new tests have a pretty good chance of being related to the actual skills you may have in these subject areas. We also feel that the tests will be fair since there are several knowledge questions for each skill we are trying to measure. At present we are only trying out the test. So, they will not be used to assess you; we are testing the tests.

The test is a multiple choice type. The three subject areas being tested are First Aid, Land Navigation, and Rifles. Below is an example of a test item and the procedure you are to follow in answering the questions.

EXAMPLE: Blood spurting from a wound, means what has been injured?

- a) skin
- b) artery
- c) vein
- d) capillary
- e) muscle

The answer is "b," artery. Circle b to show this is the correct answer. Only circle one answer for each question. Also, do not guess if you are not sure of an answer. Wrong answers will be counted against you. You will have three hours to finish the test. This will be more time than you will need. Are there any questions? Turn the page and begin. When you have finished the whole test, hold up your hand so your booklet can be collected.

NOTE: You have been provided with a map, a protractor and a straightedge to use with a part of the Land Navigation test. The map should not be removed from the booklet until you begin working on that section.

ATTACHMENT 3b

FIRST AID PAPER AND PENCIL TEST

TASK CODE

01.005

01.005.K03

You want to make sure that the airway of a casualty is not blocked by his tongue. You should place his head and chin in what position?

- a) chin down and head forward
- b) chin up and head forward
- * c) chin up and head back
- d) chin down and head down
- e) chin and head even

01.005

01.005.K06

What should you do to prevent a casualty from choking on anything that might get in his airway?

- a) sit him up
- * b) turn his head to one side
- c) elevate his feet
- d) lay him face down
- e) lay him face up

01.005

01.005.K07

One of your buddies has been hit in the leg. The leg is broken and bleeding. He passes out and is vomiting. What should you do right away?

- a) apply a leg splint
- b) put on a tourniquet
- c) apply digital pressure
- d) apply pressure dressing
- * e) clear upper airway

01.006

01.006.K01

A member of your squad has been hit. You cannot tell whether he is breathing or not. What should you do?

- a) check to make sure he is not breathing. If not, give him artificial respiration.
- b) if you cannot tell whether he is breathing, do not give him artificial respiration. It may be harmful
- c) check the color of his fingernails to see if he is still alive
- * d) begin artificial respiration immediately
- e) check the pupils of his eyes to see if he is still alive

01.006

01.006.K02

Which of the following would never be used as a way of giving artificial respiration to a casualty?

- * a) thumb jaw lift
- b) mouth to mouth
- c) chest pressure arm-lift
- d) mouth to mask
- e) mouth to nose

01.006

01.006.K03

You are next to a soldier who has been hit. He is not conscious, not breathing, and has a jaw fracture. How should you administer artificial respiration?

- a) mouth to mouth
- b) thumb jaw lift
- c) two hand jaw lift
- * d) mouth to nose
- e) chest pressure arm-lift

01.008.002

01.008.002.K06

Blood is spurting from a wound. Use digital pressure to control bleeding until:

- a) a tourniquet can be applied
- b) the artery can be tied
- c) medical aid comes
- d) medicine is applied to the wound
- * e) a pressure dressing can be unwrapped and applied

01.008.003

01.008.003.K04

A soldier has a badly bleeding wound. You put on a tourniquet. It is covered by a blanket to keep the victim warm. How do you mark the wounded man?

- a) "T" on the back
- b) "B" on the back
- * c) "T" on the forehead
- d) "B" on the forehead
- e) "W" on the forehead

01.008.002

01.008.002.K05

A member of your squad has been hit in the cheek just below the eyes. Blood is spurting from the wound. Where should you apply digital pressure to stop the bleeding?



a



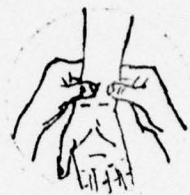
b



c



* d



e

01.008.002

01.008.002.K05

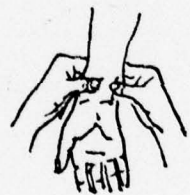
A member of your squad has been hit in the lower part of the upper arm. Blood is spurting from the wound. Where should you apply digital pressure to stop the bleeding?



* a



b



c



d



e

01.008.002

01.008.002.K05

A member of your squad has been hit in the lower leg. Blood is spurting from the wound. Where should you apply digital pressure to stop the bleeding?



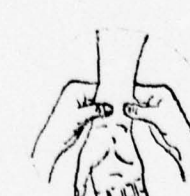
a



b



* c



d



e

01.008.003

01.008.003.K05 Once a tourniquet is applied, it should be loosened:

- a) after the first 2 hours
- b) only after the bleeding has stopped
- c) every fifteen or twenty minutes
- d) after 24 hours
- * e) by medical personnel

01.008.003

01.008.003.K06 Apply a tourniquet to stop bleeding

- a) instead of using finger pressure
- b) from internal wounds
- c) instead of a pressure dressing
- * d) only when other methods fail
- e) instead of raising the wounded part

01.008.003

01.008.003.K07 You have applied a tourniquet to a casualty. How should you mark the casualty that will help the medic treat him?

- a) your name, in case the medic wants to get in touch with you
- * b) when you put on the tourniquet
- c) where in the field you put on the tourniquet
- d) how tight you made the tourniquet
- e) the name of casualty's C.O.

01.008.003

01.008.003.K08 A soldier has a badly bleeding wound of the right forearm. Direct pressure and elevation do not stop the bleeding. Where would you apply a tourniquet?

- a) above the wound
- * b) just above the elbow
- c) just below the elbow
- d) just below the shoulder over the pressure point
- e) at the wrist over the pressure point

01.010

01.010.K01 What action is never used to control bleeding of a wound?

- a) use pressure dressing
- b) raise the wounded part
- c) apply pressure at pressure points
- * d) lower the wounded part
- e) use of a tourniquet

01.010

01.010.K01 There are several actions used to control shock. Which of the following is not used to control shock in an unconscious casualty?

- a) control bleeding
- b) reassure the casualty
- * c) position him on his back
- d) keep the casualty warm
- e) loosen tight clothing

01.010

01.010.K02

A soldier has a belly wound. He is conscious. What position would you put him in to prevent shock?

- a) on his stomach with his head raised about 6 inches
- * b) on his back with his legs raised about 6 inches
- c) on his side with his head and legs at the same level
- d) on his stomach with legs raised about 6 inches
- e) on his back with head raised about 6 inches

01.016.001

01.016.001.K01

In the field your buddy has received bad heat burns. There is no sterile dressing available. What would be the next best thing to do until he can be given medical treatment?

- a) leave burns open to the air
- * b) use a piece of a shirt-tail to dress the burns
- c) apply a burn ointment
- d) clean the burns with alcohol
- e) take off one of the victim's socks and use it to dress the burns

01.016.001

01.016.001.K02

You are giving first aid to some soldiers with heat burns on their bodies. What should you do right away?

- * a) prevent shock
- b) clean the burns
- c) break all blisters caused by the burns
- d) put an ointment on the burns
- e) put iodine on the burns

01.016.001

01.016.001.K07 What first aid action should not be used for bad heat burns?

- a) cut and lift away clothing
- b) apply sterile dressing
- * c) apply burn ointment
- d) give casualty cool salt & soda
- e) position the casualty

01.016.001

01.016.001.K08 What first aid action should you take for a casualty with blisters from heat burns?

- a) break the blisters and clean the area with water
- b) break the blisters and apply burn ointment
- c) break the blisters and put on a sterile dressing
- d) break the blisters and put on talcum powder
- * e) none of the above

01.016.001

01.016.001.K10 A fellow soldier has been burned. There is clothing all around and over the burned area. What first aid should you give him?

- a) carefully remove all the clothing that is stuck to the burn
- b) cut away all the cloth and the burned skin
- * c) cut away cloth, except any cloth that sticks to the skin
- d) only cut away the cloth above the burn
- e) only cut away the cloth below the burn

01.016.001

01.016.001.K11 You are giving first aid to someone with a heat burn. What do you do to lower the chance of infection?

- a) clean the burn
- b) break the blisters
- c) put an ointment on the burn
- * d) apply a sterile dressing
- e) put iodine on the burn

01.016.001

01.016.001.K13 You are giving first aid to a buddy with heat burns. He is awake and has no other injuries. What would you give him to drink?

- a) warm salt and soda
- * b) cool salt and soda
- c) hot tea
- d) cold tea
- e) nothing to drink

01.016.002

01.016.002.K04 Flames from a chemical fire are burning a buddy near you. What should you do to smother the flames?

- a) roll him on the ground
- b) wrap him in a blanket
- c) use dry leaves or grass
- d) tell him to run
- * e) flush him with water

01.016.002

01.016.002.K05 You see some burning chemicals left in your buddy's skin. You cannot wash or brush them away. What should be done?

- a) nothing
- b) put on a sterile bandage
- c) put on a burn ointment
- * d) pick out the pieces of chemical with a knife
- e) make sure the burned area gets plenty of air

01.016.002

01.016.002.K08 A flame from a White Phosphorous (WP) fire is on your buddy. What should you not do?

- * a) put a dry sterile dressing on
- b) douse flame with urine
- c) pour water on flame
- d) put mud on flame
- e) put a wet cloth on the flame

01.022

01.022.K01 You are on a road march in hot weather. One of your buddies passes out. His skin is hot and dry. He most likely has:

- a) heat exhaustion
- b) loss of water
- c) fatigue
- * d) heat stroke
- e) heat cramps

01.022

01.022.K04

Which one of the following can cause death?

- a) poison sumac
- b) poison oak
- * c) heat stroke
- d) heat exhaustion
- e) heat cramps

01.022

01.022.K05

What action should you take in first aid for heat stroke?

- a) keep the victim warm
- b) make him sweat
- c) cover the victim with blankets
- d) do not do anything, wait for a medic
- * e) cool off the victim

01.022

01.022.K06

A member of your squad is a victim of "sun stroke."
What should you do to save his life?

- a) cool him off slowly
- b) warm him quickly
- c) keep his body temperature steady
- d) warm him slowly
- * e) cool him off quickly

01.022

01.022.K07

A victim of heat stroke becomes conscious. What should you give him to drink?

- a) hot coffee
- b) cold beer
- * c) cool salt water
- d) milk
- e) warm tea

01.022

01.022.K08

You have just given first aid to a heatstroke victim in your squad. What do you do now?

- a) let him go back to work
- b) make sure he does not drink anything for the next 12 hours
- c) keep him warm
- * d) make sure he gets medical treatment quickly
- e) keep his feet raised about 6 inches for the next 12 hours

01.029

01.029.K01

One very serious immediate result of a "sucking" chest wound is:

- a) pneumonia
- * b) the lungs collapse
- c) pleurisy
- d) asthma
- e) the flu

01.029.K02

What should you do first to seal a sucking chest wound?

- a) apply first aid dressing directly to wound
- * b) apply inside surface of plastic wrapper of first aid dressing directly to wound
- c) apply outside surface of plastic wrapper of first aid dressing directly to wound
- d) put on medicine to stop infection
- e) put a cup like bandage over the wound

01.029

01.029.K04

You are giving first aid to a buddy who has a "sucking" chest wound. What action(s) should you take?

- a) stop the bleeding
- b) clear the airway
- c) protect the wound
- d) prevent or treat shock
- * e) all of the above

01.029.K02,K05,K07

Which of the following should not be done as first aid for a sucking chest wound?

- a) secure bandages with a belt
- b) have casualty breathe out strongly
- * c) have casualty take a deep breath and hold it.
- d) let casualty sit up if this is comfortable
- e) have casualty lie on injured side if he wants to lie down

01.031.K02

Your buddy has a belly wound. What position should you put him in?

- a) on his stomach
- b) on his right side
- c) on his left side
- * d) on his back
- e) in a sitting position

01.031.K06

Your buddy has a belly wound and is in pain. He says he is hungry and thirsty. What can you do?

- a) give him a little water but no food
- b) give him a little food but no water
- c) give him a little food and water
- * d) give him nothing by mouth
- e) give him something for pain

ATTACHMENT 3c

RIFLES PAPER AND PENCIL TEST

15.001.K01

A soldier wants to disassemble his M16A1. Which statement below is correct?

- a) He may field strip the M16A1, but only under supervision.
- * b) He may field strip the M16A1 without supervision.
- c) He may completely disassemble the lower receiver group after he field strips the M16A1.
- d) Only qualified maintenance personnel are allowed to disassemble any part of the M16A1.
- e) The M16A1 must be disassembled and lubricated after every 20 rounds of firing.

15.001.S01

You are taking your M16A1 apart. The first 5 steps for field stripping are given below. However, the order may not be correct. Which sequence is correct?

1. Press takedown pin to right
2. Open bolt, check chamber for ammo
3. Remove magazine
4. Pull back on charging handle
5. Take out bolt carrier and assembly

- a) Exactly as given: 1, 2, 3, 4, 5
- b) 4, 3, 2, 1, 5
- * c) 3, 2, 1, 4, 5
- d) 3, 2, 1, 5, 4
- e) 1, 3, 2, 4, 5

15.001.S01

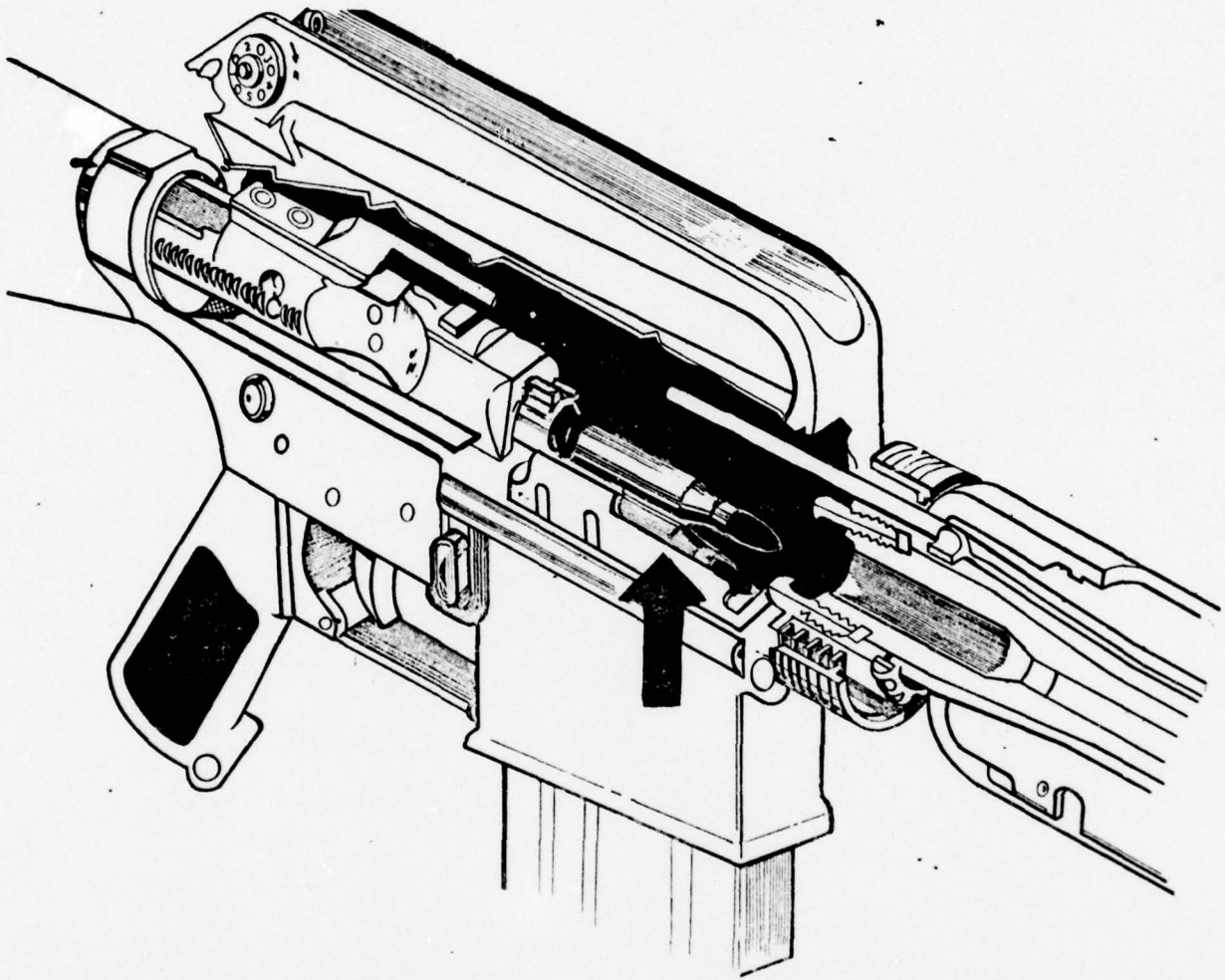
What is the correct order for the next 5 M16A1 field stripping steps. Again, the order below may be wrong. What sequence is correct? (Hint: the correct sequence allows you to pull the bolt out of the carrier assembly. This is step 11).

6. Remove charging handle
7. Push out firing pin retaining pin
8. Put bolt in lock position
9. Remove firing pin
10. Take out bolt cam pin

- a) 7, 6, 8, 9, 10
- * b) Exactly as given: 6, 7, 8, 9, 10
- c) 7, 6, 8, 10, 9
- d) 6, 7, 9, 8, 10
- e) 8, 7, 6, 10, 9

15.002.K01

What functioning cycle is shown in the picture below?
(Assume rifle is working properly).



- a) Chambering
- * b) Feeding
- c) Cocking
- d) Extracting
- e) Locking

15.002.K02

What does a complete function check of the M16A1 rifle consist of? Select one of the following:

- a) Put selector in SAFE position. Check to see that the hammer won't fall when the trigger is pulled.
- b) Put selector in SEMI position. Check to see that the hammer will fall when the trigger is pulled.
- c) Operating the rifle through the six basic steps.
- * d) Checking operation of the rifle while selector is in SAFE, SEMI, and AUTO positions.
- e) Checking to assume that the magazine is feeding cartridges for chambering in a functional manner.

15.003.S02

Assume the temperature is -10 degrees Fahrenheit (10 degrees below zero Fahrenheit). What kind of lubrication is authorized for your M16A1 in this weather?

- * a) Semi-fluid lubricating oil (LSA)
- b) Weapons light machine oil (WMO)
- c) 90W grease (90WG)
- d) 30 weight penetrating oil only
- e) "Dry slide" aluminum disulfate

15.003.S02

You wish to clean the barrel of your M16A1. You have a wire bore brush, dipped in bore cleaner. Which cleaning method is authorized?

- a) Brush bore from muzzle to chamber. Push it back and forth while in the bore. Continue until bore is well covered with cleaner.
- b) Brush bore from chamber to muzzle. Push it back and forth while in the bore. Continue until bore is well covered with cleaner.
- c) Brush bore from muzzle to chamber. Push brush through bore until it comes out of muzzle. Use at least 5 strokes and 3 rotating motions.
- d) Brush bore from chamber to muzzle. Push it back and forth while in the bore. Use at least 5 strokes and 3 rotating motions.
- * e) Use wire bore brush to brush from chamber to muzzle. Push brush through bore until it extends beyond muzzle. Continue until the bore is well covered with cleaner.

15.004.K03

What part(s) of a M16A1 magazine should be lubricated?

- a) All the magazine parts except the spring
- b) The lips
- c) The follower
- * d) The spring
- e) The charger strip

15.008.001.S05

What is the correct sequence of instruction for the following steps in the basic rifle marksmanship course?

- M Mechanical Training
- O Orientation
- T Target Detection
- P Preparatory Marksmanship
- R Record Firing and Target Detection Testing
- F Field Firing

- a) Exactly as given (M, O, T, P, R, F)
- b) P, O, M, T, F, R
- * c) O, M, P, T, F, R
- d) R, M, O, T, P, F
- e) M, O, T, P, F, R

15.008.002.K03

Look at the target and the shot group:



What might have caused this pattern?

- a) Improper trigger control
- b) Incorrect sight alinement
- c) Eye not focused on front sight
- d) Loose position
- * e) All of the above are possible causes

15.008.002.K03 A trainee is flinching while firing his M16A1. Which pattern is most likely to result from flinching?

a)



b)



c)



* d)



e)



15.008.002.K03

What probably caused this shot grouping from an M16A1?
(Assume firer is right handed):



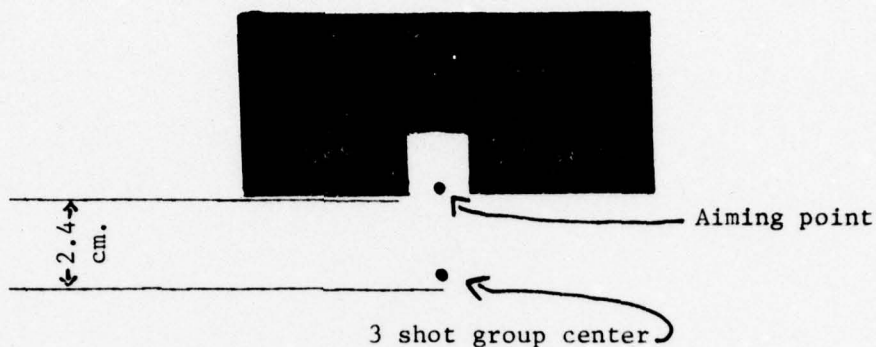
- a) Breathing while firing
- b) Incorrect zero
- c) Incorrect sight alinement
- d) Failure to compensate for wind
- * e) Sitting position right elbow slipping

15.008.002.K05

Which statement is correct concerning an accurate M16A1 battlesight zero setting?

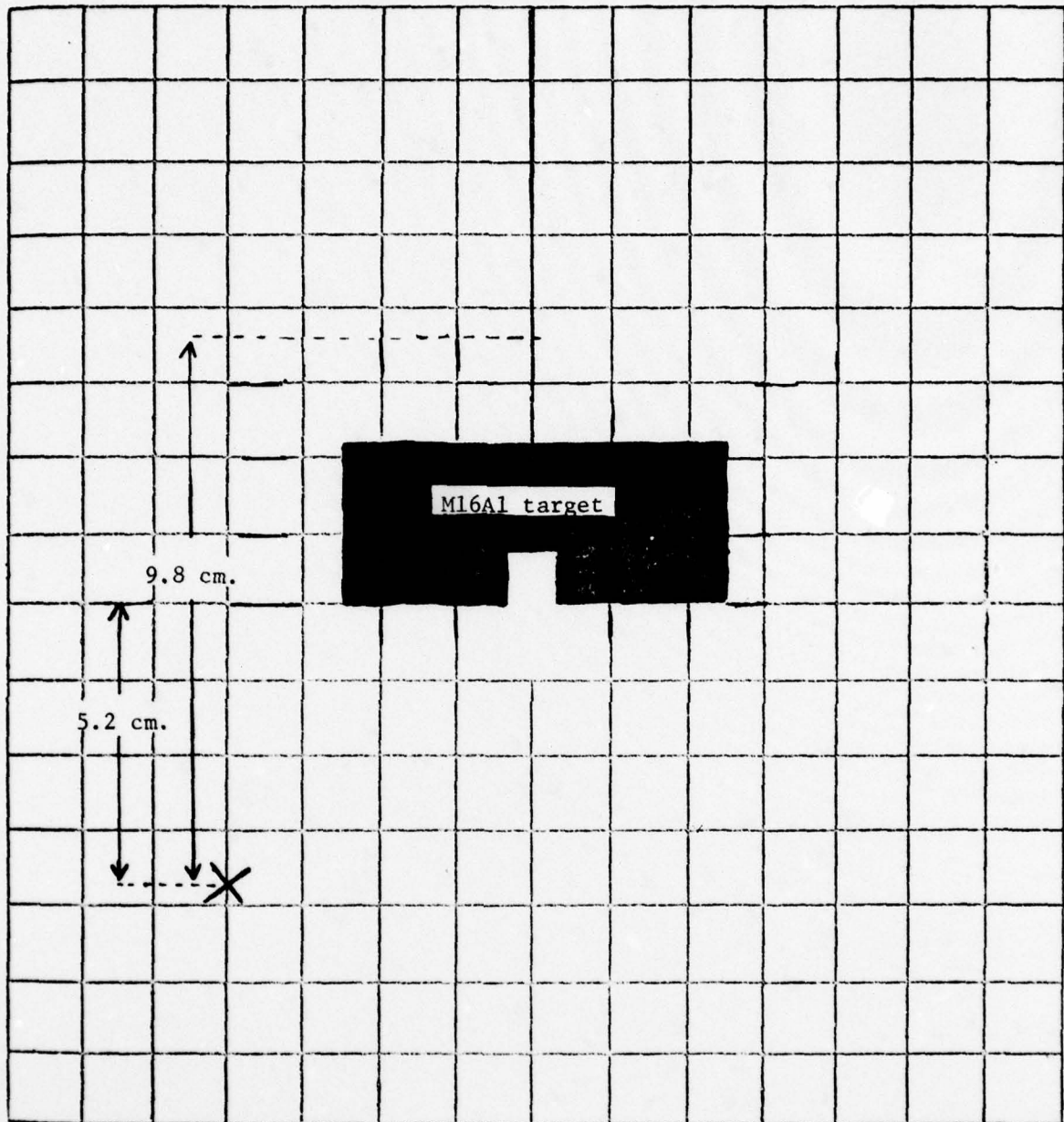
- * a) A soldier should hit his aiming point at 250 meters with an accurate setting.
- b) It will cause the bullet to travel in a perfectly straight line until it strikes the target, thus increasing accuracy.
- c) It softens the recoil from the rifle.
- d) A soldier should hit his aiming point at 25 meters with an accurate setting.
- e) It requires a 250 meter firing range to get an accurate setting.

15.008.002.K06 A soldier wants to find the battlesight zero for his M16A1. He then shoots at a 25 meter target. The center of his 3 shot group lies 2.4 centimeters below his aiming point (see below):



What should he do?

- a) Adjust for windage
- b) Adjust for elevation
- c) Adjust for both windage and elevation
- * d) Don't do anything. The battlesight zero is accurate
- e) Change the spot weld



1 Square = 1.4 cm.

Look at the battlesight zero 25 meter target. "X" marks the center of the 3 shot group. How should the soldier firing this group adjust the sight on his M16A1?

- a) 1 click up, 2 clicks right
- b) 2 clicks up, 4 clicks right
- * c) 4 clicks up, 8 clicks right
- d) 14 clicks up, 8 clicks right
- e) The correct answer is not given.

15.008.002.K09

Below are sight pictures of aiming error that will cause poor marksmanship.



A



B

Which statement below is true, referring to these incorrect sight pictures?

- a) Sight picture A causes a miss that increases as range to the target increases.
- * b) Sight picture B causes a miss that increases as range to the target increases.
- c) Both sight pictures A and B cause a miss that increases as range to the target increases.
- d) Both sight pictures A and B cause a miss that stays the same (remains constant) regardless of range.
- e) Neither sight picture A nor B can cause a miss that increases as range to the target increases.

15.008.002.S04 How much time should be given to preparatory marksmanship as a part of the basic rifle marksmanship course?

- a) Determined strictly by the amount of previous marksmanship experience of the trainees.
- b) Use the average time given for a company strength of 200 men, as reported in the Army Subjects Schedule.
- c) Determined strictly by performance of trainees during the preparatory marksmanship period.
- d) 32 hours in all cases.
- * e) Check Army Subjects Schedule for training hours adjusted to company/battery strength.

15.008.002.S05 The spot weld is an important "steady hold" factor. Which statement is true for the spot weld?

- a) Try to obtain a stock weld first. If you can't obtain it, then use a spot weld.
- b) It is obtained by placing the cheek directly against the stock.
- * c) It is obtained by touching the cheek to the thumb, and rolling up a wad of flesh against the cheekbone.
- d) It is obtained by placing the rifle butt firmly into the pocket formed in the right shoulder.
- e) It is obtained by letting the rifle lie across the heel of the left hand, and resting between thumb and forefinger.

15.008.002.S09

15.008.002.K07 One of these M16A1 aiming sequences is correct. Which one is it?

- a) Focus eye on target. Shift focus to front sight to aline sights. Shift focus to target. Fire.
- * b) Focus eye on front sight to aline sights. Shift focus to target. Shift focus to front sight to re-check sight alinement. Fire.
- c) Focus eye on front sight to aline sights. Aim at target but keep eye focused on front sight. Fire.
- d) Focus eye on front sight to aline sights. Shift focus eye on rear sight aperture. Shift focus to front sight. Fire.
- e) Focus eye on rear sight aperture. Shift focus to front sight to aline sights. Shift focus to target. Fire.

15.009.K02

An untrained soldier is learning basic M16A1 marksmanship. Where should the front sight be set? (Assume this soldier is not yet able to fire tight shot groups.)

- * a) 24 clicks from lowest position.
- b) 24 clicks from highest position.
- c) 12 clicks from lowest position.
- d) 12 clicks from highest position.
- e) centered and set on short range aperture.

15.009.S04

A trainee is zeroing his rifle in a prone position. He makes this "long vertical" 3 shot group:



Which factor most likely caused this shot group?

* a) Improper breathing

b) This error in sight alinement



c) This error in placement of aiming point

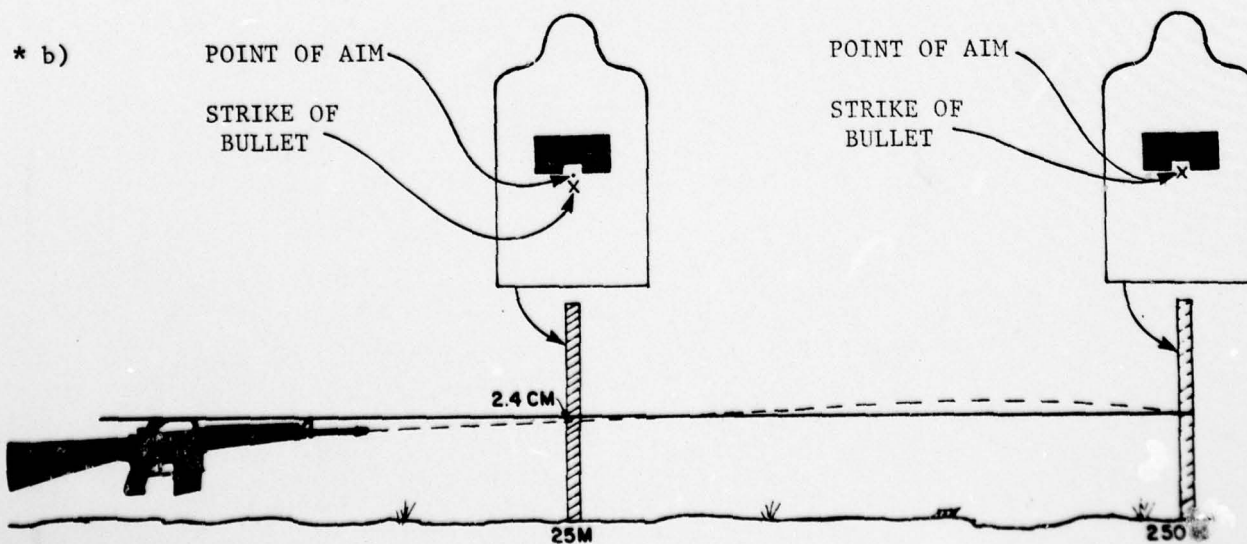
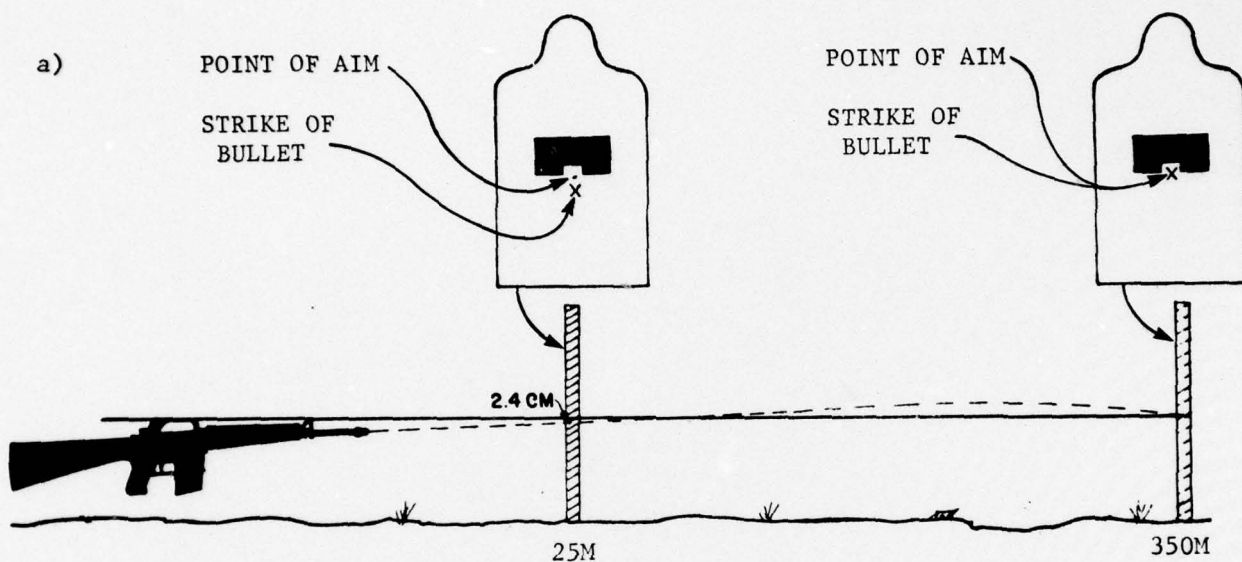


d) Left elbow slipping out

e) Right hand grip too rigid

15.009.K03

Which picture correctly matches U.S. Army doctrine for battlesight zero of an M16A1?



AD-A054 504

HUMAN RESOURCES RESEARCH ORGANIZATION ALEXANDRIA VA
DEVELOPMENT OF JOB RELEVANT PAPER AND PENCIL TESTS.(U)
JUN 73 H WAGNER, C D FINK, R D BEHRINGER

F/G 5/9

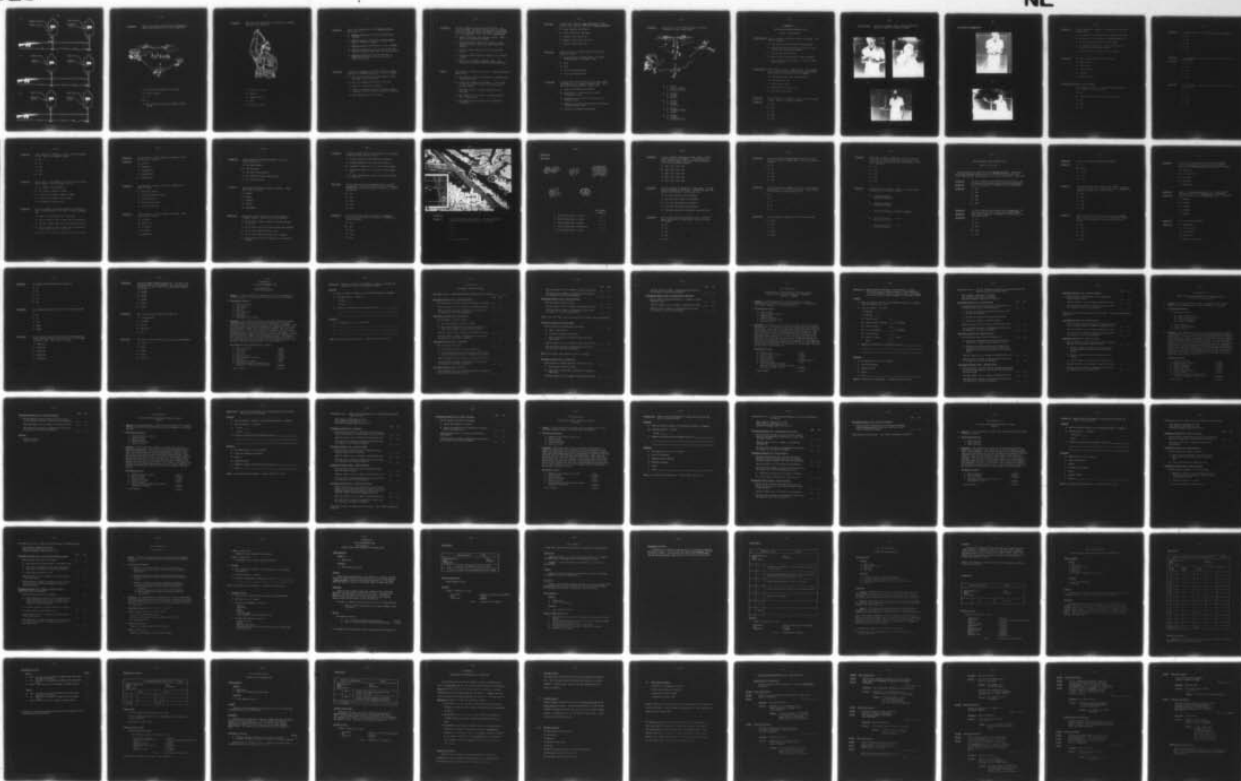
DAHC19-73-C-0004

NL

UNCLASSIFIED

2 OF 2

AD
A054504

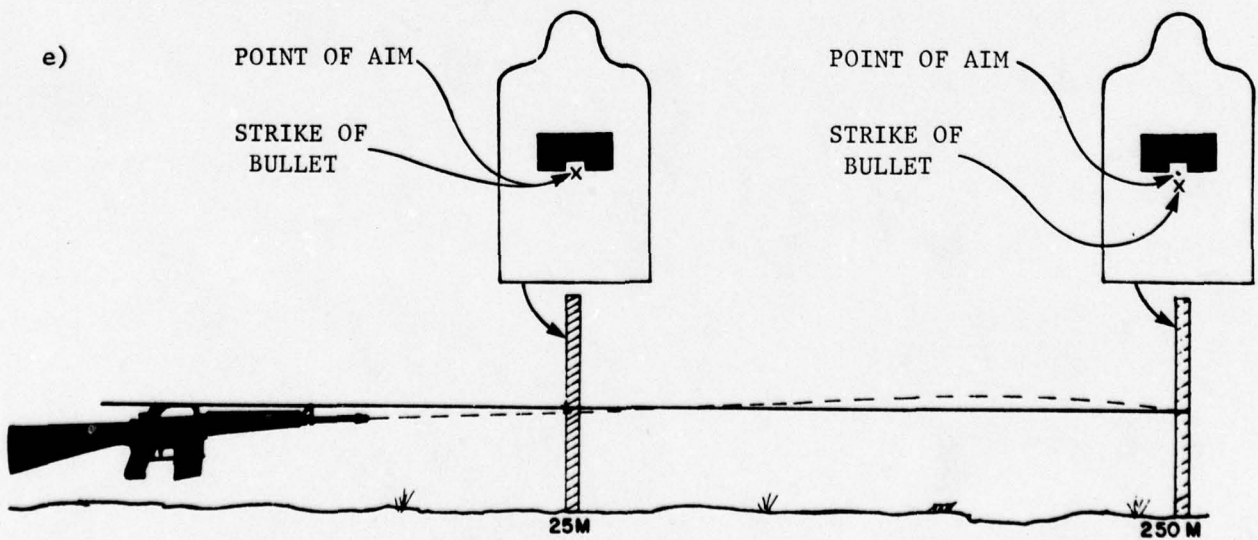
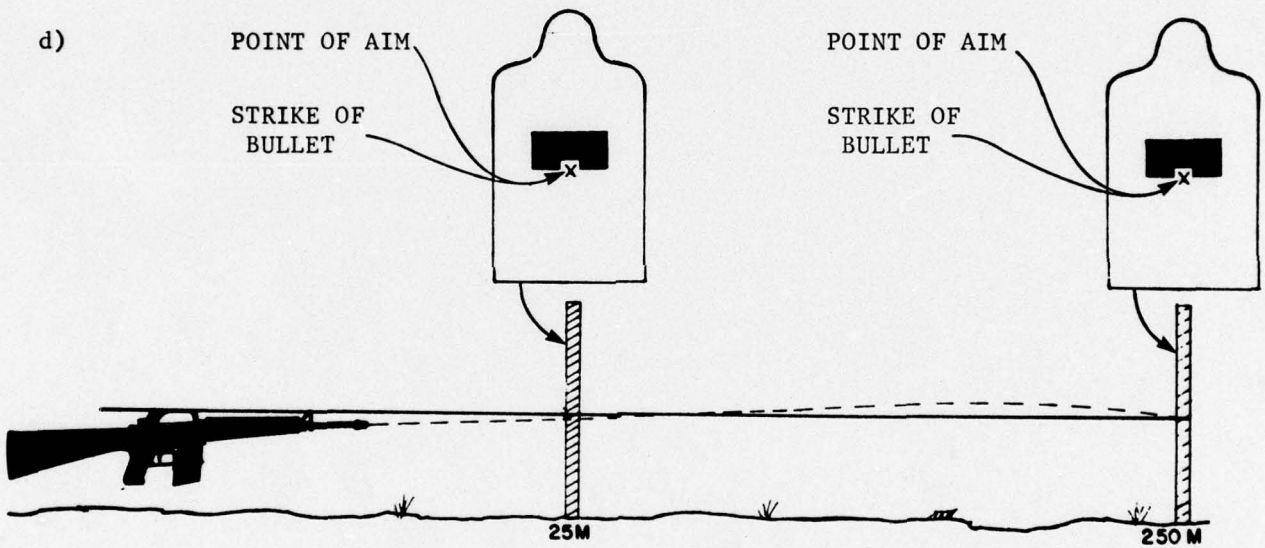
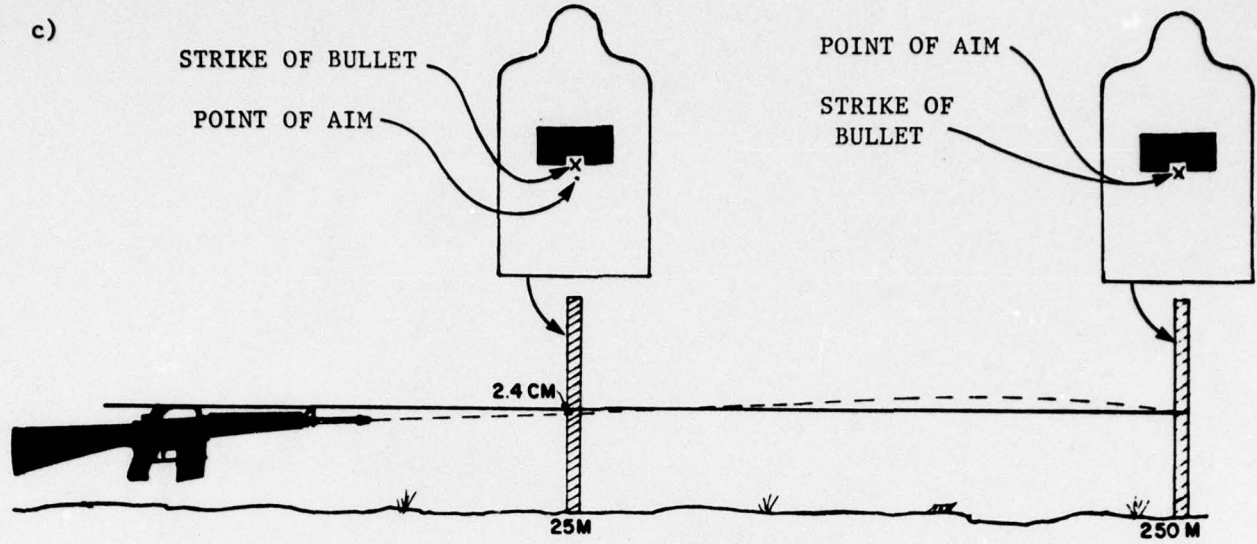


END

DATE
FILMED

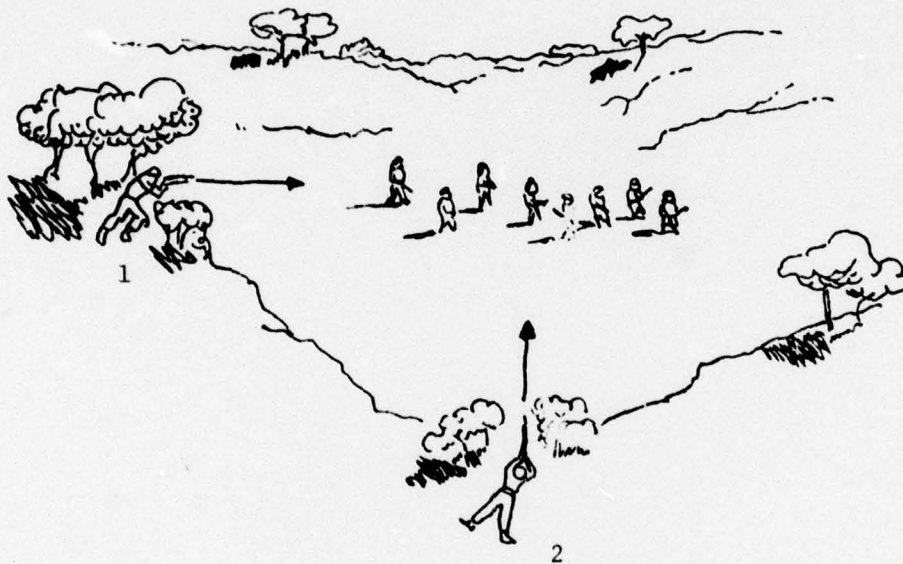
6 -78

DDC



15.010.K01

Look at the picture. Which of the 2 riflemen can make the most effective use of his beaten zone?



- a) A soldier at an oblique to the enemy.
- b) 1 and 2 equally.
- c) 1
- * d) 2
- e) The soldier in the picture making a frontal attack.

15.010.K04

What does this signal mean? (The soldier is striking his helmet over and over).



- a) Prepare for action
- b) Disperse
- c) Commence firing
- d) Halt
- * e) Cover our advance

15.014.K01

One of the statements is true of immediate action. Which one is it?

- * a) Immediate action will successfully reduce many stoppages.
- b) Immediate action is taken after remedial action fails to reduce the stoppage.
- c) Immediate action is never used to clear a stoppage.
- d) Immediate action should not be used, because the cause of a stoppage always must first be determined.
- e) Immediate action means that you will have to immediately lubricate critical points on the M16A1 in the field.

15.014.K02

You have a stoppage in your M16A1. What is the very first step in immediate action to clear this stoppage?

- * a) Tap upward on the bottom of the magazine to make sure that it is fully seated.
- b) Pull the charging handle fully to the rear.
- c) Check for a round in the chamber.
- d) Inspect the weapon thoroughly in order to apply a remedy. This will clear the identified stoppage.
- e) Keep attempting to fire the rifle.

15.014.K03

You have chambered a round in your M16A1 rifle. You pull the trigger, the hammer releases, but the cartridge won't fire. The cartridge is not indented. What should you do, if immediate corrective action is unsuccessful?

- * a) Inspect firing pin, bolt, and bolt carrier. There may be carbon fouling and damage.
- b) Replace the ejector spring, the extractor spring, and the extractor, even if they don't seem to be damaged.
- c) Use the charging handle to retract bolt and bolt carrier.
- d) Inspect the hammer spring for damage or for incorrect assembly.
- e) Notify the responsible ammunition agency. The malfunction is probably caused by faulty ammunition.

15.015

Your M16A1 has a weak extractor spring. What malfunction(s) might occur?

- a) The firing pin strikes the primer of a cartridge with insufficient force.
- * b) A fired case remains in the chamber. A live round is then forced into the base of the fired case as the bolt returns.
- c) Two rounds fire on a single trigger pull in the SEMI mode.
- d) The trigger fails to return to a forward position after trigger release.
- e) The magazine fails to feed the first round from the magazine.

15.017.K02

A soldier must look for target indicators to find a sniper's exact position. Which are 3 target indicators?

- * a) Sound, movement, camouflage
- b) Crack, rapid count, and thump
- c) Distance, time, and motion
- d) Compass, surveillance, and sound
- e) Linear, column, and moving

15.017.K03

Which indicator will usually pinpoint the enemy's position at night?

- a) Camouflage that has turned brown, thus highly visible through a "starlight" scope.
- b) Sound
- * c) Shine
- d) Slow, deliberate movement
- e) "Crack and thump" method

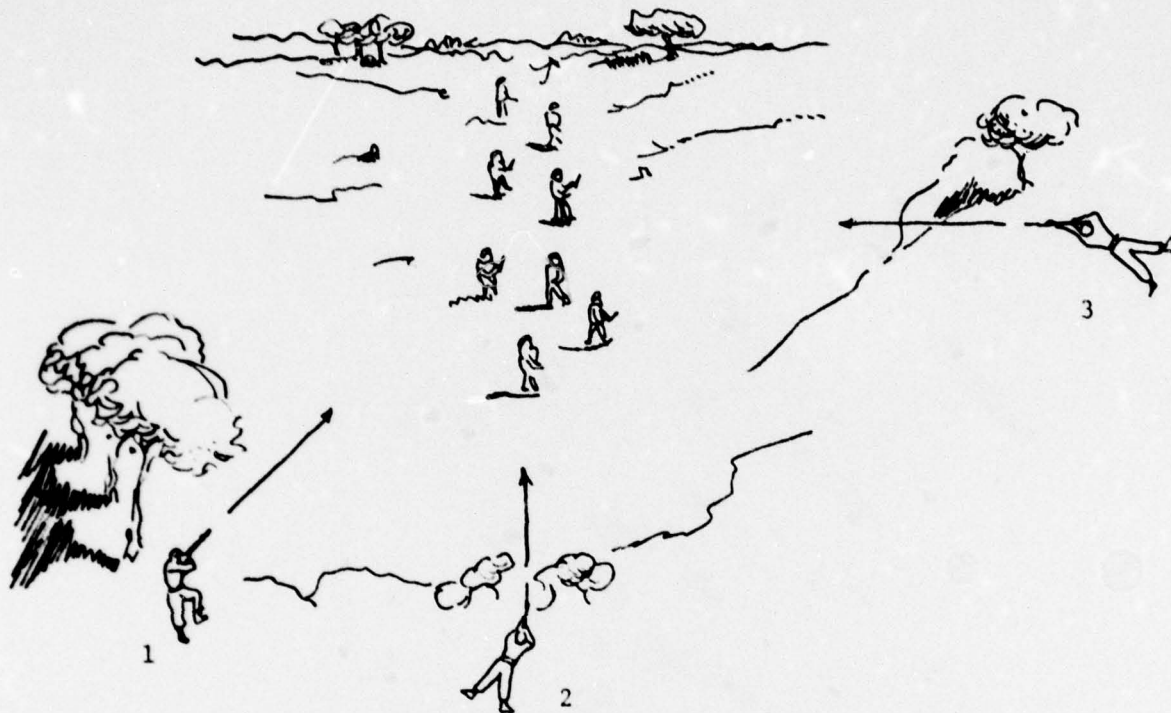
15.017.K06

A soldier moves into a new area held by enemy troops. The enemy may be of immediate danger to him. Which 30-second searching technique is best here?

- a) 50 meter overlapping strip method.
- * b) Quick glances at various specific points throughout the area.
- c) Sweeping the eyes across the terrain in one continuous view.
- d) Sweeping the eyes up and down from the horizon to a point 25 meters away.
- e) 100 meter overlapping strip method.

15.010.K01

What are the correct classifications of rifle for riflemen 1, 2, and 3 shown below?



- a) 1. oblique
2. frontal enfilade
3. flanking enfilade
- b) 1. grazing
2. plunging
3. head-on
- * c) 1. oblique
2. frontal
3. flanking
- d) 1. oblique
2. flanking enfilade
3. frontal
- e) 1. oblique
2. flanking
3. frontal enfilade

ATTACHMENT 3d

LAND NAVIGATION PAPER AND PENCIL TEST

PART I. (Without Map)

03.001.001.K01 You are to sight an objective and read an azimuth. The
lensatic compass:

- a) must be held firm and pointed slightly upward
- b) must be held loosely to allow the needle to move
freely, and point slightly upward
- * c) must be held firm and level
- d) must be held firm and pointed slightly downward
- e) must be held level but loosely to allow free move-
ment of needle

03.001.001.K04 You are going to take a compass reading. Your compass
is at a certain distance from various metallic objects.
Which object will interfere with your compass?

- a) high tension power lines 100 meters away
- b) truck 55 meters away
- c) tank 25 meters away
- * d) telephone wires 5 meters away
- e) your rifle 1 meter away

03.002.S03 Given a map with a G-M Angle of 17° W. The Grid Azimuth
is 110° . What is the Magnetic Azimuth?

03.005.S03

- a) 93°
- * b) 127°
- c) 173°
- d) 197°
- e) 343°

03.001.001.S01

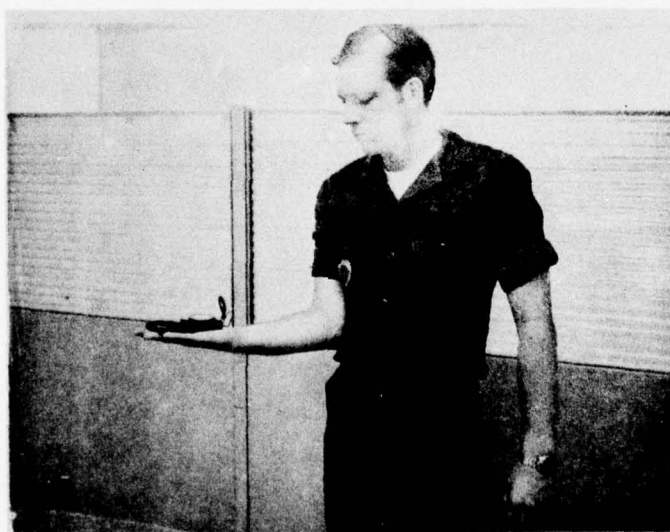
There are five photos below. Which one shows the center hold method of holding a compass?



a

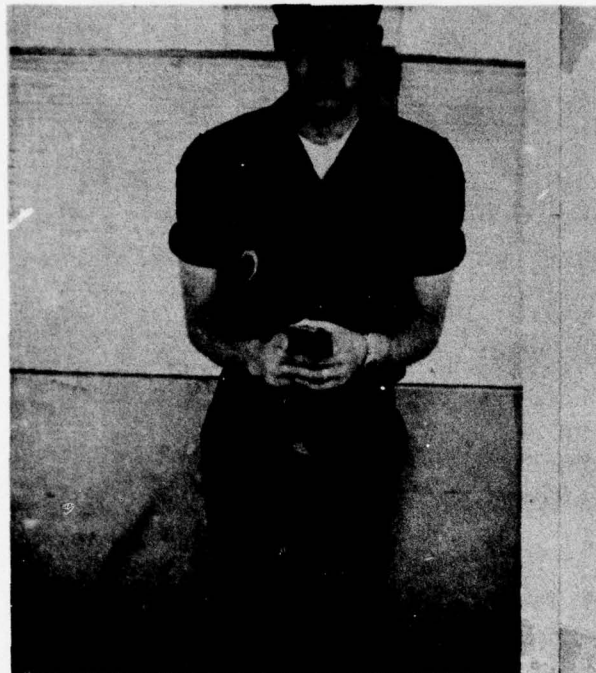


b



c

03.001.001.S01 (continued)



* d



e

03.002.K04

You are measuring an azimuth. The protractor is oriented properly when:

- a) the base line is lined up with an East-West grid line
- * b) the base line is parallel to a North-South grid line
- c) 90° is at the top and 180° is at the right
- d) the index is placed at the center of the object to which you are measuring an azimuth
- e) the base line is aligned with the two points

03.002.K05

How is an azimuth measured from Grid North?

- a) right then up
- b) left then up
- c) counterclockwise
- * d) clockwise
- e) right then down

03.002.K06 (critical for 03.004 task)

The G-M angle on map is 2° . A grid azimuth is equal to 210° . What is the true azimuth?

- a) 90°
- * b) cannot be determined from information given
- c) 182°
- d) 208°
- e) 212°

03.003.K01

The back azimuth of a line differs from the azimuth by:

- a) 80°
- b) 90°
- * c) 180°
- d) 270°
- e) 360°

03.003.K02

If the azimuth is equal to 75° , what is the value of the back azimuth?

03.015.S05

- a) 105°
- b) 180°
- c) 205°
- * d) 255°
- e) 285°

03.003.K03

If the azimuth is equal to 272° , what is the value of the back azimuth?

- a) 2°
- * b) 92°
- c) 182°
- d) 192°
- e) 352°

03.004.S02

Given a map having a G-M Angle of 12° E. The Magnetic Azimuth is 97°. What is the Grid Azimuth?

03.015.S04

- a) 85°
- b) 102°
- * c) 109°
- d) 168°
- e) 348°

03.004.S03

Given a map with a G-M Angle of 3° W. The Magnetic Azimuth is 185°. What is the Grid Azimuth?

03.015.S04

- a) 87°
- b) 93°
- * c) 182°
- d) 188°
- e) 267°

03.004.S04

Given a map with a G-M Angle of 22° W. The Magnetic Azimuth is 20°. What is the Grid Azimuth?

03.015.S04

- a) 42°
- b) 158°
- c) 202°
- d) 258°
- * e) 358°

03.004.K02

A map's declination diagram contains:

03.005.K02

- a) the angle between true north and grid north
- b) the G-M angle
- c) the date the G-M angle was calculated
- d) three prongs representing true, magnetic, and grid north
- * e) all of the above

03.004.K03

You are to plot a magnetic azimuth on a map. The first thing to do is:

- a) orient protractor to horizontal grid lines
- b) set compass to magnetic azimuth
- c) draw line using straight edge to point
- * d) convert magnetic azimuth to grid azimuth
- e) convert magnetic azimuth to true azimuth

03.005.S02

Given a map with a G-M Angle of 10° E. The Grid Azimuth is 355°. What is the Magnetic Azimuth?

- a) 5°
- b) 80°
- c) 190°
- d) 260°
- * e) 345°

03.005.S04

Given a map with a G-M Angle of 46° E. The Grid Azimuth is 20° . What is the Magnetic Azimuth?

- a) 66°
- b) 136°
- c) 160°
- d) 226°
- * e) 334°

03.005.K03

You are given a grid azimuth on a map to use in the field with a compass. The first thing to do is:

- a) set compass to grid azimuth
- b) set compass to magnetic azimuth
- * c) convert grid azimuth to magnetic azimuth
- d) convert grid azimuth to true azimuth
- e) plot magnetic azimuth on map

03.005.K02

You are to measure road distance between two points on a map. A straight edge is to be used. To use it properly you:

- a) align the straight edge with both points
- b) make tick marks on the straight edge at both points
- c) bend the straight edge to fit the curves in the road
- * d) make tick marks on the straight edge and the map for every straight portion of the road
- e) pivot the straight edge along the curves of the road

03.009.S01

Listed below are 5 grid coordinate statements. Which one of them is correct?

03.009.K03

- a) 10017314
- b) G10017314L
- c) 16SG10017314L
- d) 16S10017314GL
- * e) 16SGL10017314

03.009.K01

What principle is used to state the coordinates of a point on a map?

- * a) read right then up
- b) read in clockwise direction
- c) read up then left
- d) read down then right
- e) read left then down

03.009.K10

Listed below are 5 grid coordinate statements. Which one of them is correct?

- a) FL6275783
- b) GL1246 3147
- c) FL-314-612
- d) FL-769132
- * e) GL00107100

03.009.K10

Given the grid coordinates FL72759119. The last 4 digits (9119) are:

- a) the right reading
- * b) the up reading
- c) the grid zone designation
- d) the 100,000 M. Square identification
- e) the contour interval

03.009.K11

Listed below are 5 grid coordinate statements. Which one of them is correct?

- a) GL01245
- * b) FL9265
- c) FL9565721
- d) FL95617
- e) GL021491100

03.011.K02

Listed below are 5 statements on the use and care of a magnetic compass. Which one of them is correct?

- a) do not take a compass reading closer than 2 meters to a rifle
- b) do not preset an azimuth before taking night readings
- c) do not close compass when not in use
- * d) do not shock compass as balance may be damaged
- e) do not practice using the compass, as it may become damaged

03.011.K03

A magnetic needle will not orient properly if the compass is not held level. Why is this so?

- a) because the metal in the ground will affect it
- b) because magnetism in the earth will affect it
- * c) because the needle will not be able to move freely
- d) because the needle will be affected by the compass case
- e) because nearby metallic objects will be more likely to affect it

03.014.K02

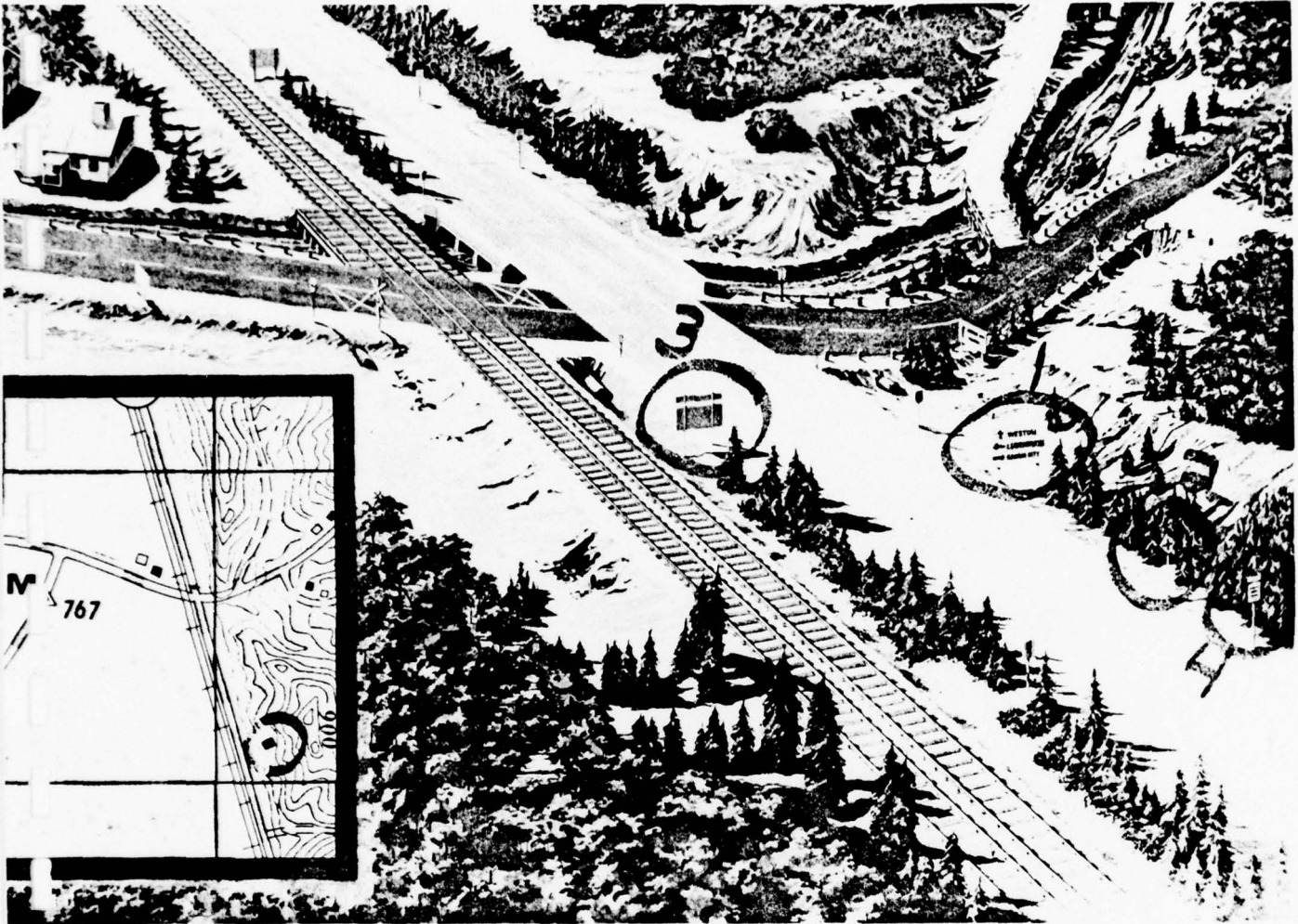
You are trying to locate an unknown point on a map by intersection. To do this you must know your own location. You must also know the location of at least _____ other position(s).

- * a) one
- b) two
- c) three
- d) four
- e) five

03.015.K03

You are trying to locate your position by resection. To do this you must know the location of at least _____ ground feature(s).

- a) one
- * b) two
- c) three
- d) four
- e) five



03.012.S01

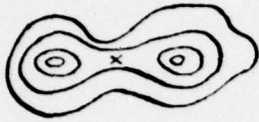
03.013.S01

Look at the picture and map above. The object circled on the map is located at which point on the picture?

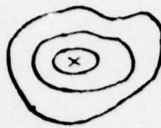
- a) 1
- b) 2
- c) 3
- d) 4
- * e) none of the above

03.012.K01

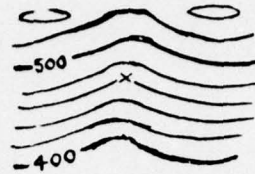
03.013.K01



a



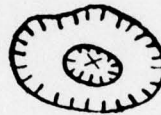
b



c



d



e

Enter Answer
Here

1. Which diagram shows a hilltop?
2. Which diagram shows a valley?
3. Which diagram shows a saddle?
4. Which diagram shows a depression?
5. Which diagram shows a ridge?

_____ b
_____ c
_____ a
_____ e
_____ d

03.024.S07

You are to bypass an obstacle at right angles. You are traveling along a 210° azimuth. You are to make four turns. Which azimuths will you be traveling along to return to your original azimuth?

- a) 120° , 210° , 120° , 210°
- * b) 300° , 210° , 120° , 210°
- c) 300° , 210° , 300° , 210°
- d) 210° , 120° , 300° , 210°
- e) 120° , 300° , 120° , 210°

03.024.K01

You are to bypass an obstacle at a right angle. You turn right and proceed for 100 meters. You then turn left and proceed for 100 meters. At this point you:

- a) turn left and proceed for 90 meters
- b) turn right and proceed for 100 meters
- * c) turn left and proceed for 100 meters
- d) turn right and proceed for 90 meters
- e) turn right proceed for 100 meters, then turn left

03.024.K02

You are traveling along an azimuth of 125° . You will make a right turn at a right angle. What will be your new azimuth?

- a) 35°
- b) 55°
- c) 90°
- d) 195°
- * e) 215°

03.024.K03

You are traveling along an azimuth of 105° . You will make a left turn at a right angle. What will be your new azimuth?

- * a) 15°
- b) 75°
- c) 120°
- d) 165°
- e) 195°

03.024.K05

You are to bypass an obstacle at night. You have preset your compass. You turn 90° to the right. What luminous letter is below the long luminous line?

- * a) E
- b) W
- c) S
- d) N
- e) L

03.027.K02

In what color are contour lines printed on most maps?

- * a) brown
- b) blue
- c) red
- d) black
- e) green

03.028.S02

The height of tower B is 300 feet. You are located at Point A on the ground, 2,000 feet from the base of the tower. What is the percentage slope from Point A to the top of the tower?

- a) + 7%
- b) - 15%
- * c) + 15%
- d) - 60%
- e) + 67%

03.028.K02

Listed below are 5 formulas. Which one of them is used to compute the percent (%) of slope?

- a) $\frac{\text{Vertical Distance}}{\text{Horizontal Distance}}$
- b) $\frac{\text{Horizontal Distance}}{\text{Vertical Distance}}$
- c) $\frac{\text{Vertical Distance} \times \text{Horizontal Distance}}{100}$
- * d) $\frac{\text{Vertical Distance}}{\text{Horizontal Distance}} \times 100$
- e) $\frac{\text{Horizontal Distance}}{\text{Vertical Distance}} \times 100$

LAND NAVIGATION PAPER AND PENCIL TEST

PART II (with map)

The following items require the use of Map MR7 (Columbus). Please take it from your booklet, and spread it out in front of you. You will also find a protractor and strip of paper for you to use in this part of the test.

03.002.S01

You are to obtain a Grid Azimuth using a protractor. You are located at the stream junction in grid square FL9876.

03.002.S02

What is the azimuth to the stream junction at FL962769?

03.015.S06

- a) 80°
- b) 180°
- c) 200°
- d) 260°
- * e) 280°

03.002.S01

You are to obtain a Grid Azimuth using a protractor. You are located at the road junction in grid square FL9881.

03.002.S02

What is the azimuth to the benchmark on McClusky Hill in grid square FL9779?

03.015.S06

- a) 43°
- b) 133°
- c) 214°
- * d) 223°
- e) 313°

03.004.S01

What is the G-M Angle on Map MR7 (Columbus)?

03.011.S02

- a) 0°
- * b) $1/2^{\circ}$ E.
- c) $1/2^{\circ}$ W.
- d) 1° E.
- e) 1° W.

03.006.S01

You are in the bleachers in grid square FL8876. There is a building in grid square FL9276. What is the straight-line distance in yards between the two points?

- a) 3090
- b) 3580
- c) 3710
- * d) 3930
- e) 4390

03.006.S02

You are at the road intersection in grid square FL9879. There is another road intersection in grid square FL9881. What is the road distance in meters between these two points?

- a) 880
- b) 1230
- c) 1760
- * d) 1810
- e) 2020

03.006.S03

You are at the stream junction in grid square GL1090.
There is an observation tower in grid square GL0789.
What is the straight-line distance between the two points?

- a) 3150 yards
- b) 1.9 statute miles
- * c) 3270 meters
- d) 3350 yards
- e) 3650 meters

03.009.S03

There is an observation tower in the Lee Field Airborne
Drop Area. What are its six-digit grid coordinates?

03.027.S01

(The grid square is in the upper right quarter of the map).

- a) FL898074
- * b) GL074898
- c) GL078894
- d) GL084898
- e) GL088897

03.009.S03

What is located at FL926727?

03.027.S01

- * a) swimming pool
- b) stream junction
- c) road junction
- d) grandstand
- e) parachute jump towers

03.009.S04

The Eighth Division Road and the First Division Road intersect. This is shown close to the center of the map.

03.009.S05

What are the eight-digit coordinates of this point?

03.027.S01

- a) GL00688307
- b) FL99328307
- c) FL82939932
- d) GL00328293
- * e) FL99328293

03.009.S04

What is to be found at GL03858275?

03.009.S05

a) Borrow pit

03.027.S01

- * b) Victory Lodge
- c) Brocmfield Range
- d) Craston Hill
- e) Dianda Range

03.014.S04

You are located on the hilltop in grid square GL0377. There is an object or feature to be found along a magnetic azimuth of 318° from your position. It is also along a magnetic azimuth of 240° from the hilltop in grid square GL0580. What is it?

- a) hilltop
- b) stream junction
- * c) road junction
- d) grandstand
- e) building

03.015.S08

You are at an unknown location. You determine the grid azimuth to the road junction in grid square GL0294 to be 123.5° . The grid azimuth to the road junction in grid square GL0296 is 56.5° . What is your location?

03.015.K01

- * a) the hilltop in grid square GL0195
- b) the road junction in grid square GL0596
- c) the stream junction in grid square GL0792
- d) the lookout tower in grid square GL0096
- e) the road junction in grid square GL0392

03.027.S02

There is a hilltop located at GL02927246. What is the number on the nearest numbered contour line?

- a) 300
- b) 376
- * c) 400
- d) 467
- e) 490

03.027.S03

You are located at GL05478787. What is your elevation?

- a) 300 feet
- b) 325 feet
- * c) 350 feet
- d) 375 feet
- e) 400 feet

03.009.K04

The center vertical grid line on Map MR7 is:

- a) 71
- b) 80
- c) 84
- d) 90
- * e) 00

03.009.K06

The leftmost vertical grid line at the bottom of Map MR7 is:

- a) 88
- * b) 89
- c) 689
- d) 8900
- e) 68900

03.012.K02

You are located along the north bank of the Chattahoochee River. The grid azimuth from your location to the bridge in FL9074 is 187° . What is your location?

- a) FL90147175
- b) FL90717670
- * c) FL90717683
- d) FL90507481
- e) FL76719083

03.012.K03

You are alongside some railroad tracks. You spot a road 600 meters south of your location. Also, you can see a cemetery to the east. What is your grid square location on the map?

- a) FL9886
- b) GL0286
- c) GL0681
- d) GL1178
- * e) GL0777

03.027.K01

What is the contour interval on the MX7 Map?

- a) 3 statute miles
- b) 1:50,000
- * c) 20 feet
- d) 100 meters
- e) 165

03.027.K04

What type of terrain feature is to be found at FL99387945?

- a) hilltop
- b) ridge
- c) valley
- * d) saddle
- e) depression

ATTACHMENT 4a

FIRST AID PERFORMANCE TEST

Test Station No. 1
Artificial Respiration

1. Purpose: To test the ability to administer artificial respiration to a casualty (01.006), and to maintain the airway of a casualty (01.005).
2. Performances Measured:
 - a. Position casualty
 - b. Clear airway
 - c. Tilt head
 - d. Lift jaw
 - e. Pinch nose shut
 - f. Seal mouth
 - g. Exhalation
 - h. Breathing until relieved
3. Procedure: This station will consist of one side covered by a movable non-transparent screen (entrance) and three permanently closed non-transparent sides. Each testee will enter this station separately, close the screen behind him, and will subsequently be exposed to the test condition (casualty "dummy" will be lying on the ground). Next, the test situation will be read to the testee by the evaluator ("At this station the casualty next to you is unconscious. You find a weak pulse. He has stopped breathing. Complete your estimate and then take immediate action") and the testee will commence with performing the tasks. The evaluator will evaluate the testee on the eight performance measures specified in #2. Upon completion of the tasks the testee will exit Station No. 1 and proceed to the next assigned station (i.e., Station No. 2).

Performance Criteria (Corresponds to 2 above)

a. Position casualty	1 point
b. Clear airway	2 points
c. Tilt head	1 point
d. Lift jaw	1 point
e. Pinch nose shut	2 points
f. Seal mouth/blow forcefully	2 points
g. Exhalation	1 point
h. Breathe until relieved	1 point
i. Performance measures (tasks) must be performed in sequence (no exceptions)	<u>2 points</u>
Total Possible	13 points

Station One - Administer Artificial Respiration to Casualty (01.006), and
Maintain the Airway of a Casualty (01.005)

Standard

- A. must successfully complete each performance measure in sequence
- B. time per subject: 5 minutes
 - 01.006 _____
 - 01.005 _____
- C. exhibits non-authorized performances (specify) _____

Equipment

- A. one dummy device to act as casualty
- B. _____
- C. _____
- D. _____

Number of Evaluators and Background: 1 medical NCO, (91 B or 91 C)

E X A M P L E

Performance Test Score Sheet

Performance Test 1 - Administer Artificial Respiration to Casualty _____

	YES	NO
<u>Performance Measure One - Position Casualty</u>		

- | | | |
|---|-------|-------|
| - Did the subject carefully place the casualty on his back | _____ | _____ |
| (Did the subject fail to attempt to perform this skill) | _____ | _____ |
| (Did the subject attempt an unauthorized action prior to, during, or after the performance) | _____ | _____ |

Performance Measure Two - Clear Airway

- | | | |
|--|-------|-------|
| - Did the subject clear the airway | _____ | _____ |
| A. turn the casualty's head to one side | | |
| B. run fingers behind the lower teeth and over the back of the tongue to remove mucus from mouth | | |
| (Did the subject fail to attempt to perform this skill) | _____ | _____ |
| (Did the subject attempt an unauthorized action prior to, during, or after the performance) | _____ | _____ |

Performance Measure Three - Tilt Head

- | | | |
|--|-------|-------|
| - Did the subject tilt head | _____ | _____ |
| A. turn casualty's head to a face up position | | |
| B. tilt his head back so that the frame of the neck is stretched with the chin in a "jutting-out" position | | |
| (Did the subject fail to attempt to perform this skill) | _____ | _____ |
| (Did the subject attempt an unauthorized action prior to, during, or after the performance) | _____ | _____ |

Performance Measure Four - Lift Jaw

- | | | |
|---|-------|-------|
| - Did the subject lift jaw by placing thumb into casualty's mouth and lifting his jaw forward | _____ | _____ |
|---|-------|-------|

YES NO

(Did the subject fail to attempt to perform this skill)

(Did the subject attempt an unauthorized action prior to, during, or after the performance)

Performance Measure Five - Pinch Nose Shut

- Did the subject pinch nose shut

(Did the subject fail to attempt to perform this skill)

(Did the subject attempt an unauthorized action prior to, during, or after the performance)

/Tester will ask, "What steps do you take now to breathe for the casualty."/

Performance Measure Six - Seal Mouth

- Did the subject seal mouth/blow forcefully

A. takes a deep breath

B. seal mouth around casualty mouth

C. blow forcefully into casualty's mouth until his chest rises

(Did the subject fail to attempt to perform this skill)

(Did the subject attempt an unauthorized action prior to, during, or after the performance)

/Tester will state, "The casualty's chest is rising."/

Performance Measure Seven - Exhalation

- Did the subject perform exhalation after chest rises

A. stop blowing and remove mouth

B. take another breath while listening for casualty's exhalation

(Did the subject fail to attempt to perform this skill)

YES NO

(Did the subject attempt an unauthorized action prior to, during, or after the performance)

Performance Measure Eight - Breathing Until Relieved

- Did the subject perform breathing in a cadence of 12-20 times per minute

(Did the subject fail to attempt to perform this skill)

(Did the subject attempt an unauthorized action prior to, during, or after the performance)

Test Station No. 2

Stop Bleeding of a Wound (pressure dressing, digital pressure, and elevation), Dress Wound (optional, and Treat for Shock

1. Purpose: To test the ability to stop the bleeding of a wound (01.008.001 and 01.008.002) dress a wound (optional), and administer shock control measures to a casualty (01.010).
2. Performances Measured:
 - a. Uncover wound
 - b. Apply pressure dressing
 - c. Elevate wound
 - d. Digital pressure
 - e. Protect wound (optional)
 - f. Treat for shock
3. Procedure: This station will consist of one side covered by a movable non-transparent screen (entrance) and three permanently non-transparent closed sides. Each testee will enter this station separately, close the screen behind him, and will subsequently be exposed to the test condition (casualty with simulated bleeding wound on his extremity). Next, the test situation will be read to the testee by the evaluator ("At this station the casualty next to you is conscious, your estimate reveals that he has no fractures, but there is a bleeding wound on his lower leg, take appropriate action"). The evaluator will evaluate the testee on the six performance measures specified in #2. Upon completion of the tasks the testee will exit Station No. 2, and proceed to the next assigned station (Station No. 3).

Performance Criteria

- | | |
|--|--------------------|
| a. Uncover wound | 1 point |
| b. Apply pressure dressing | 2 points |
| c. Elevate wound | 2 points |
| d. Digital pressure | 2 points |
| e. Protect wound | 1 point (optional) |
| f. Treat for shock | 1 point |
| g. Performance measures (tasks) | |
| must be performed in sequence with the | |
| exception of tasks c and d | <u>2 points</u> |

Total Possible

11 points

Station Two - Applies pressure dressing to stop bleeding of a wound (01.008.001), applies digital pressure to stop bleeding of a wound (01.008.002) elevates to stop bleeding, dress wound, and administer shock control measures to a casualty (01.010)

Standard

A. must successfully complete each performance measure, in sequence, with the exception of c and d

B. time per subject: 5 minutes

01.008.001 _____

01.008.002 _____

(1) uncover wound _____

(2) apply pressure dressing _____ 01.008.001

(3) elevate wound _____

(4) digital pressure _____ 01.008.002

(5) protect wound _____

(6) treat for shock _____ 01.010

Total _____

C. exhibits non-authorized performances (specify) _____

Equipment

A. one dummy device to act as casualty

B. first aid dressing

C. simulated wound

D. poncho

E. other _____

Number of Evaluators and Background: 1 medical NCO, 91 B or 91 C

Performance Test 2 - Stop the Bleeding by Pressure Dressing, Elevation and
Digital Pressure Point/Dress Wound

Test Situation (specified in handout)
Test Condition (specified in handout)
Necessary Equipment (specified in handout)

Performance Measure One - Uncover Wound

YES NO

- Did the subject uncover the wound by lifting away the clothing, taking the following safeguards

A. he does not touch the wound with his hands in the process of examination

B. he does not drag the clothing over the wound

C. he does not attempt to clean the wound

(Did the subject fail to attempt to perform this act)

(Did the subject attempt an unauthorized action prior to, during, or after the performance)

Performance Measure Two - Apply Dressing

- Did the soldier apply pressure dressing by:

A. opening the dressing and ensuring that the soft, thick center touches nothing except the wound

B. placing the opened dressing over the wound and exerting firm, evenly distributed pressure on the dressing with the palm and fingers of the opened hand

(Did the subject fail to attempt to perform these acts)

(Did the subject attempt an unauthorized action prior to, during, or after the performance)

Performance Measure Three - Elevate Wound

- Did the soldier raise the injured extremity higher than the rest of the casualty's body while exerting pressure on the dressing

(Did the subject fail to attempt to perform this act)

(Did the subject attempt an unauthorized action prior to, during, or after the performance)

	YES	NO
<u>Performance Measure Four - Digital Pressure</u>		
- Did the soldier apply pressure on the appropriate digital pressure point	_____	_____
(Did the subject fail to attempt to perform this act)	_____	_____
(Did the subject attempt an unauthorized action prior to, during, or after the performance)	_____	_____
<u>/The tester states, "The bleeding has now stopped. Take further appropriate action."/</u>		
<u>Performance Measure Five - Protect Wound</u>		
- Did the soldier protect the wound by wrapping the tails of the dressing around the edges and tying the tails	_____	_____
(Did the subject fail to attempt to perform this act)	_____	_____
(Did the subject attempt an unauthorized action prior to, during, or after the performance)	_____	_____
<u>Performance Measure Six - Treat for Shock</u>		
- Did the soldier treat the patient for shock by performing the following steps (order optional):	_____	_____
A. soldier elevates both legs 6 to 8 inches (note: may use helmet for prop) and crosses legs on helmet		
B. soldier loosens clothing and removes pads if present		
C. soldier wraps the casualty with available cover		
(Did the subject fail to attempt to perform this act)	_____	_____
(Did the subject attempt an unauthorized action prior to, during, or after the performance)	_____	_____

Test Station No. 3

Apply Tourniquet (01.008.003), Dress Wound (optional),
and Treat for Shock (01.010)

1. Purpose: To test the ability to apply a tourniquet, dress a wound (optional), and administer shock control measures to a casualty.
2. Performances Measured:
 - a. Applying tourniquet
 - (1) making a tourniquet
 - (2) put tourniquet in place
 - (3) tighten tourniquet
 - (4) secure tourniquet
 - b. Protect the wound
 - c. Leave tourniquet exposed
 - d. Treat for shock
3. Procedure: This station will consist of one side covered by a movable non-transparent screen (entrance) and three permanently (non-transparent) closed sides. Each testee will enter this station separately, close the screen behind him, and will subsequently be exposed to the test condition (casualty wearing uniform with simulated wound). Next, the test situation will be read to the testee by the evaluator ("At this station the casualty next to you has a bleeding wound on his lower leg. You have already tried to stop the bleeding by applying pressure on the dressing, elevating the limb using pressure on the digital pressure point, but the wound is still bleeding. Take appropriate action.") The evaluator will evaluate the testee on the performance measures specified in #2. Upon completion of the tasks, the testee will exit Station No. 3 and proceed to the next station (i.e., Station No. 4).

Performance Criteria

a. Making a tourniquet	1 point
b. Put tourniquet in place	2 points
c. Tighten tourniquet	2 points
d. Secure tourniquet	1 point
e. Protect the wound	1 point
f. Leave tourniquet exposed	1 point
g. Treat for shock	1 point
h. Performance measures (tasks) must be performed in sequence except e to g	<u>2 points</u>
Total Possible	11 points

Station Three - Applies a tourniquet (01.008.003), dress wound, and administer shock control measures to a casualty (01.010)

Standard

A. must successfully complete each performance measure, in sequence, with the exception of e to g

B. time per subject: 5 minutes

01.008.003 _____

01.010 _____

(1) applies a tourniquet _____ (01.008.003)

(2) protect the wound _____

(3) treat for shock _____ (01.010)

Total _____

C. exhibits non-authorized performances (specify) _____

Equipment

A. one dummy device to act as casualty

B. first aid dressing

C. simulated wound

D. equipment for making a tourniquet

E. poncho

F. others _____

Number of Evaluators and Background: 1 medical NCO, 91 B or 91 C

Performance Test 3 - Apply (type of wound) tourniquet /Dress wound, and
treat for shock/ - optional

Test situation (specified in 21-4)

Test condition (specified in 21-4)

Necessary equipment (specified in 21-4)

YES NO

Performance Measure One - Making a Tourniquet

- Did the soldier take the casualty's belt, rifle sling, or any other appropriate item (such as ----) and make a loose loop

(Did the subject fail to attempt to perform this act)

(Did the subject attempt an unauthorized action prior to, during, or after the performance)

Performance Measure Two - Put Tourniquet in Place

- Did the soldier perform the following:

A. place the loop between the wound and the casualty's body

B. put the tourniquet over the smooth sleeve or trousers leg of the casualty

(Did the soldier fail to attempt to perform these performances)

(Did the subject attempt an unauthorized action prior to, during, or after the performance)

Performance Measure Three - Tighten Tourniquet

- Did the subject pass a stick, bayonet scabbard, or any similar item under the loop and tighten the loop over the appropriate pressure point just enough to stop the bleeding

(Did the subject fail to attempt to perform this act)

(Did the subject attempt an unauthorized action prior to, during, or after the performance)

Performance Measure Four - Secure Tourniquet

YES NO

- Did the subject secure the free end of the "stick"
to the body with a strip of cloth or piece of web gear

(Did the subject fail to attempt to perform this act)

(Did the subject attempt an unauthorized action prior
to, during, or after the performance)

Optional

Protect the wound
Treat for shock

Test Station No. 4

Sucking Chest Wound (01.029) and Treat for Shock
(01.010)

1. Purpose: To test the ability to apply first-aid measures for a sucking chest wound (01.029) and administer shock control measures to a casualty (01.010).
2. Performances Measured:
 - a. Estimate extent of injury
 - b. Seal the wound
 - c. Apply dressing
 - d. Further seal wound
 - e. Treat for shock
3. Procedure: This station will consist of one open side covered by a movable non-transparent screen (entrance) and three permanently closed sides (non-transparent). Each testee will enter this station alone, close the screen behind him, and will subsequently be exposed to the test condition (casualty wearing uniform with simulated wound). Next, the test situation will be read to the testee by the evaluator ("At this station the casualty next to you is unconscious. He has been wounded in the chest area; air is being sucked into the wound. Complete your estimate and take appropriate action.") The evaluator will evaluate the testee on the performance measures specified in #2. Upon completion of the tasks the testee will exit Station No. 4 and proceed to the next station.

Performance Criteria

a. Estimate extent of injury	1 point
b. Seal the wound	2 points
c. Apply dressing	1 point
d. Further seal wound	1 point
e. Treat for shock	1 point
f. The performance measures (tasks must be completed in sequence	<u>2 points</u>
Total Possible	8 points

Station Four - Apply First-Aid Measures for a Sucking Chest Wound (01.029)
and Treat for Shock (01.010)

Standard

- A. must successfully complete each performance measure in sequence
- B. time per subject: 5 minutes
- C. 01.029 _____
01.010 _____
- D. exhibits non-authorized performances (specify) _____

Equipment

- A. one dummy device to act as casualty
- B. first aid dressing with wrapper
- C. poncho
- D. simulated wound
- E. expedient bandages (bandoliers, pistol belt, etc.) _____
- F. other _____

Number of Evaluators and Background: 1 medical NCO, 91 B or 91C

Performance Test 4 - Apply First-Aid Measure for a Sucking Chest Wound and Treat for Shock

Test situation (specified in 21-4)
 Test condition (specified in 21-4)
 Necessary Equipment (specified in 21-4)

	YES	NO
<u>Performance Measure One - Estimate</u>		
- Did the soldier check the condition of the casualty's airway and examine for an exit wound or other injuries	_____	_____
(Did the subject fail to attempt to perform this act)	_____	_____
(Did the subject attempt an unauthorized action prior to, during, or after the performance)	_____	_____
<u>Performance Measure Two - Seal the Wound</u>		
- Did the soldier apply the plastic wrapper from the dressing directly over the wound	_____	_____
(Did the subject fail to attempt to perform this act)	_____	_____
(Did the subject attempt an unauthorized action prior to, during, or after the performance)	_____	_____
<u>Performance Measure Three - Apply Dressing</u>		
- Did the soldier place the first aid dressing firmly over the plastic wrapper	_____	_____
(Did the subject fail to attempt to perform this act)	_____	_____
(Did the subject attempt an unauthorized action prior to, during, or after the performance)	_____	_____
<u>Performance Measure Four - Further Seal Wound</u>		
- Did the soldier place other materials, such as folded poncho, over the dressing and secure them in place with expedient bandage such as bandoliers, pistol belts, or any other readily available bandaging materials	_____	_____
(Did the subject fail to attempt to perform this act)	_____	_____
(Did the subject attempt an unauthorized action prior to, during, or after the performance)	_____	_____

/The tester states, "The wound is now airtight." Take further appropriate action./

Performance Measure Five - Treat for Shock

YES NO

- Did the soldier perform the following:

A. loosen the casualty's clothing

B. place the casualty on his wounded side and wrap
him in available cover

(Did the soldier fail to attempt to perform this
performance)

(Did the soldier attempt an unauthorized action prior
to, during, or after the performance)

Test Station No. 5

Belly Wound (01.031) and Treat for Shock
(01.010)

1. Purpose: To test the ability to apply first-aid measures for a belly wound and administer shock control measures to a casualty.
2. Performances Measured:
 - a. Administer psychological first aid
 - b. Protect wound
 - c. Secure dressing
 - d. Protect the wound
 - e. Treat for shock
3. Procedure: This station will consist of one open side covered by a movable non-transparent screen (entrance) and three permanently closed sides (non-transparent). Each testee will enter this station separately close the screen behind him, and will subsequently be exposed to the test condition (casualty with simulated open belly wound. Next, the test situation will be read to the testee by the evaluator ("At this station the casualty next to you is conscious. He has a bad wound in his belly. There is blood flowing from the wound. Take appropriate action."). The evaluator will evaluate the testee on the performance measures specified in #2. Upon completion of the task, the testee will exit Station No. 5 and proceed to the next station.

Performance Criteria

a. Administer psychological first aid	1 point
b. Protect wound	3 points
c. Secure dressing	1 point
d. Protect the wound	1 point
e. Treat for shock	1 point
f. The performance measures (tasks) must be completed in sequence	<u>2 points</u>
Total Possible	9 points

Station Five - Applies First-Aid Measures for a Belly Wound (01.031) and
Treat for Shock (01.010)

Standard

A. must successfully complete each performance measure in sequence

B. time per subject: 5 minutes

01.031 _____

C. exhibits non-authorized performances (specify) _____

Equipment

A. one dummy device to act as casualty

B. first aid dressings

C. simulated wound, moulage

D. expedient bandages

E. poncho

F. other _____

Number of Evaluators and Background: 1 medical NCO, 91 B or 91 C

Performance Test 5 - Applies First-Aid Measures for a Belly Wound/Treat
for Shock

Test situation (specified in 21-4)
Test condition (specified in 21-4)
Necessary equipment (specified in 21-4)

	YES	NO
<u>Performance Measure One - Psychological First Aid</u>		
- Did the soldier inform the tester that the casualty should be reassured while checking for an exit wound and other injuries	_____	_____
(Did the subject fail to attempt to perform this performance)	_____	_____
(Did the subject attempt an unauthorized action prior to, during, or after the performance)	_____	_____
<u>Performance Measure Two - Protect Wound</u>		
- Did the soldier gently cover the injury with the casualty's sterile dressing such that the dressing was tight enough to support and cover the intestines	_____	_____
(Did the subject fail to perform this performance)	_____	_____
(Did the soldier attempt an unauthorized action prior to, during, or after the performance, such as:		
A. touching the intestines with hands or clothing		
B. tried to place intestines back into the body	_____	_____
<u>Performance Measure Three - Secure Dressing</u>		
- Did the soldier without exerting pressure over the wound, tie the tails of the dressing around the body of the casualty	_____	_____
(Did the soldier fail to perform this performance)	_____	_____
(Did the soldier attempt an unauthorized action prior to, during, or after the performance)	_____	_____

YES NO

Performance Measure Four - Protect the Wound

- Did the soldier further protect the wound by wrapping other bandaging materials such as bandoliers or torn shirts, around the dressing

— —

["The wound is now protected. Take further appropriate action."]

Test Station No. 6

Heat Burns (01.016.001) and Treat for Shock
(01.010)

1. Purpose: To test the ability to apply first aid measures for heat burns and treat for shock.
2. Performances Measured:
 - a. Uncover the burn
 - b. Apply dressing
 - c. Treat for shock
3. Procedure: This station will consist of one open side covered by a movable non-transparent screen (entrance) and three permanently closed sides (non-transparent). Each testee will enter this station separately, close the screen behind him, and will subsequently be exposed to the test condition (casualty with simulated, severe thermal burns on his extremity). Next, the test situation will be read to the testee by the evaluator ("At this station, the casualty next to you is conscious. He has been burned by fire on his lower leg. You find no other injuries. Take appropriate action."). The evaluator will evaluate the testee on the performance measures specified in #2. Upon completion of the tasks, the testee will exit Station No. 6 and proceed to the next station.

Performance Criteria

a. Uncover the burn	2 points
b. Apply dressing	2 points
c. Treat for shock	2 points
d. Performance measures (tasks) must be completed in sequence	<u>2 points</u>
Total Possible	8 points

Station Six - Applies First Aid Measures for Heat Burns (01.016.001) and
Treat for Shock (01.010)

Standard

- A. must successfully complete each performance measure in sequence
- B. time per subject: 5 minutes
 - 01.016.001 _____
 - 01.010 _____
- C. exhibits non-authorized performances (specify) _____

Equipment

- A. dummy device to act as casualty
- B. first aid dressing
- C. canteen
- D. sodium chloride packet
- E. poncho
- F. simulated wound
- G. others _____

Number of Evaluators and Background: 1 medical NCO, 91 B or 91 C

Performance Test Six - Applies First Aid Measures for Heat Burns

Test situation (specified in 21-4)

Test condition (specified in 21-4)

Necessary equipment (specified in 21-4)

	YES	NO
<u>Performance Measure One - Uncover the Burn</u>		
- Did the soldier remove the clothing that surrounds the burn, but did <u>not</u> remove objects stuck to the burn	_____	_____
(Did the soldier fail to attempt to perform this performance)	_____	_____
<u>Performance Measure Two - Apply Dressing</u>		
- Did the soldier perform the following:		
A. apply a sterile dressing to the burn assuring that only the soft, thick center touches the burn		
B. secure the dressing by tying the tails	_____	_____
<u>Performance Measure Three - Treat for Shock</u>		
- Did the soldier perform all of the following:		
A. empty the contents of one salt/soda packet into a canteen of water, shake well, and give mixture to the casualty slowly		
B. loosen the casualty's clothing		
C. wrap the casualty in available cover	_____	_____

Test Station No. 7

Chemical White Phosphorous Burns (01.016.002)
and Treat for Shock (01.010)

1. Purpose: To test the ability to apply first-aid measures for chemical white phosphorous burns and administer shock control measures to a casualty.
2. Performances Measured:
 - a. Treat white phosphorous burns
 - (1) extinguish flame
 - (2) brushes off white phosphorous
 - (3) seal burn
 - b. Treat for shock
 - (1) prepare sodium chloride-sodium bicarbonate packet for drinking
 - (2) loosen his clothing and belt
 - (3) cover casualty
3. Procedure: This station will consist of one open side covered by a movable non-transparent screen (entrance) and three permanently closed sides (non-transparent). Each testee will enter this station separately, close the screen behind him, and will subsequently be exposed to the test condition (casualty with simulated severe white phosphorous burns on his extremity). Next, the test situation will be read to the testee by the evaluator ("The casualty next to you is conscious. He has been burned by white phosphorous all over. You find no other injuries"). The evaluator will evaluate the testee on the performance measures specified in #2. Upon completion of the task, the testee will exit Station No. 7 and proceed to the next station.

Performance Criteria

a. Extinguish flame	2 points
b. Brush off white phosphorous	2 points
c. Seal burn	2 points
d. Modified treatment for shock	2 points
e. Performance measures (tasks) must be completed in sequence except for a, b, and c which may be out of sequence	<u>1 point</u>
Total Possible	9 points

Station Seven - Apply First-Aid Measures for Chemical White Phosphorous Burns (01.016.002) and Treat for Shock (01.010)

Standard

A. must complete each performance measure

B. time per subject: 5 minutes

01.016.002 _____

01.010 _____

C. exhibits non-authorized performances (specify) _____

Equipment

A. another trainee (or dummy device) to act as casualty

B. packet of sodium chloride-sodium bicarbonate mixture

C. simulated wound

D. other _____

Number of Evaluators and Background _____

Performance Test Seven - Apply First-Aid Measures for Chemical Burns

Test situation (specified in 21-4)

Test condition (specified in 21-4)

Necessary equipment (specified in 21-4)

	YES	NO
<u>Performance Measure One - Treats White Phosphorous Burn</u>		
- Did the subject perform the following:	_____	_____
A. pours water over affected area to extinguish flame		
B. wets cloth and brushes off the white phosphorous particles or use knife to flick away particles	_____	_____
C. seals the burn with wet cloth	_____	_____
(Did the subject fail to attempt to perform any part of the above steps)	_____	_____
(Did the subject attempt an unauthorized action prior to, during, or after the performance of any one of the three steps)	_____	_____

Performance Measure Two - Treat for Shock (order of Steps A, B, and C are optional)

- Did the subject perform the following:	_____	_____
A. empty (simulate) contents of one sodium chloride-sodium bicarbonate packet into a canteen full of water and instruct the casualty to drink entire amount over a one hour period		
B. loosens casualty's clothing and belt, if present	_____	_____
C. wraps casualty in available cover	_____	_____
(Did the subject fail to attempt to perform any part of the above steps)	_____	_____
(Did the subject attempt an unauthorized action prior to, during, or after the performance of any one of the three steps)	_____	_____

Test Station No. 8

Heat Stroke

1. Purpose: To test the student's ability to recognize the symptoms of heat stroke and to properly perform emergency medical procedures (01.022).
2. Performances Measured:
 - a. Ability to recognize symptoms of heat stroke from the conditions set by the tester and from viewing the patient (01.022.K01)
 - b. Person being tested recognizes and performs evaluation of heartbeat and breathing prior to performing other emergency measures.
 - c. Ability to perform the following emergency procedures:
 - (1) move the patient into shade available (01.022.K05)
 - (2) remove the patient's load bearing equipment and clothing
 - (3) fan the body with available materials (01.022.K06)
 - (4) issue instructions to begin the evacuation process (01.022.K08)
3. Procedure: At this station the casualty next to you is unconscious, his skin is hot and dry and he is not sweating. Complete your estimate and take immediate action. Testor would watch to see that testee does in fact do those things that were said to be performances that needed to be measured.
4. Performance Criteria: (on a scale of 10 points)
 - Deduct 2 points for each of the following:
 - failure to recognize heat stroke
 - failure to remove load bearing equipment and clothing
 - not fanning the body
 - Deduct 1 point for:
 - failure to evaluate heartbeat and breathing
 - Deduct 1 point for:
 - failure to move person into the shade available

-Deduct 1 point for:

failure to issue evacuation instructions

-Deduct 1 point for:

attempting to give patient anything to drink

5. Standard

A. Must successfully complete each performance (not necessarily in sequence)

B. Time per subject: 5 minutes

C. Exhibits non-authorized performance (specify _____)
_____)

Number of Evaluators and Background: 1 medical NCO (91B or 91C)

6. Equipment Needed

A. Dummy of doll training nursing techniques FSN 69107794600

B. Military uniform for dummy

C. Load bearing equipment to include:

harness

ammo pouch

pack

canteen

first aid pouch

other equipment he might normally carry

D. Include some distractors, such as:

canteen of water

poncho

salt and soda packet

(include these to see if person taking the test really knows what's going on)

ATTACHMENT 4b

RIFLES PERFORMANCE TEST

Test Station 1

15.002 Perform Functioning Check on M16A1 Rifle

Items Required:

Subject

1. M16A1 Rifle

Evaluator

1. Score Sheet and Pencil

Purpose:

Subject is scored according to his ability to perform a function check on the M16A1 Rifle with the selector lever on the SAFE position. A Function Check - consists of checking the operation of the weapon while the selector switch is in the SAFE, SEMI, and AUTO positions.

Procedure:

Subject will be asked to place the selector level in the SAFE position. He will then be instructed to perform a function check only with the SAFE position of the selector lever. The subject will be scored according to the proper procedure of the function check with the selector lever in the SAFE position.

Procedure of function check with selector lever on SAFE position:

1. Subject should automatically pull trigger (hammer should not fall*.)

Scoring

Performance Criteria:

- | | |
|--|----------|
| a. "Go" - Subject performed proper procedure. | 1 point |
| b. "No Go" - Subject did not perform proper procedure. | 0 points |

* If hammer falls with selector lever on SAFE, weapon needs repairing.

Score Sheet:

Function Check		15.002
Name/Subject No.:		Date:
Rank:		Evaluator:
Skill Level:		
	Go	Subject automatically pulled trigger
	No Go	Subject did not automatically pull trigger

Scoring Instructions:

Check appropriate box.

Station 1

15.002 5 Subjects at a Time

Instruction
Test
Evaluation

2 Minutes (Questions Anticipated)
1 Minute
1 Minute

Total 4 Minutes Per 5 Subjects

Test Station 2

15.014 Apply Immediate Action to Reduce a Stoppage of an M16A1 Rifle

Definition:

Immediate Action - is the unhesitating application of a probable remedy to reduce a stoppage without investigating the cause.

Stoppage - is any unintentional interruption in the cycle of functioning.

Purpose:

Subject is scored on the basis of following the steps in sequence of immediate action on the M16A1 Rifle.

Procedure:

Subject will be asked to perform immediate action on the M16A1 Rifle. The evaluator will check off each step as the subject performs them. Any deviation from the steps automatically means a "No Go."

Items Required:

Subject

1. M16A1 Rifle
2. M16A1 Rifle Magazine

Evaluator

1. Score Sheet and Pencil

Steps of Immediate Action:

1. Tap upward on the bottom of the magazine to ensure it is fully seated.
2. Pull charging handle fully to the rear while visually checking for ejected cartridge or case.
3. Release charging handle to feed a new round.
4. Strike forward assist assembly to ensure bolt closure.
5. Attempt to fire weapon.

Performance Criteria

Evaluator will check off each step that is successfully completed on the score sheet. If all 5 steps are completed in sequence, then the "Go" box is checked. Any deviation from the 5 steps is an automatic "No Go" and the evaluator marks the step at which the subject missed.

Score Sheet:

Immediate Action		15.014
Name/Subject No.:		Date:
Rank:		Evaluator:
Skill Level:		
	1	Tap upward on the bottom of the magazine to ensure it is fully seated.
	2	Pull charging handle fully to the rear while visually checking for ejected cartridge or case.
	3.	Release charging handle to feed a new round.
	4	Strike forward assist assembly to ensure bolt closure.
	5	Attempt to fire weapon
	Go	
	No Go	

Station 2

15.014 5 Subjects at a Time

Instruction

2 Minutes (Questions Anticipated)

Test

1 Minute

Evaluation

1 Minute

Total

4 Minutes Per 5 Subjects

Test Station 3 Part A

15.009 Zero An M16A1 Rifle

Items Required:

Subject

1. M16A1 Rifle
2. Steel Helmet (Pot)
3. Magazine
4. Ear Plugs

Evaluator

1. 3 25-meter Targets (FSN 6920-906-0169).*
2. 9 Rounds 5.56mm Ball ammunition per Subject.**
3. 25-meter Target Template for Final Zero Qualification.
4. Ear Plugs

Procedure:

Step 1. Subject(s) on the firing line will be instructed to fire three rounds at the 25 meter target for zeroing purposes. After the subject(s) have fired their first three rounds, they will then look at the target, analyze their shot group and make proper sight adjustments.

Step 2. The subjects will then be given their second three rounds. They will fire these three rounds into their second target and allowed to make final sight alinements.

Step 3. The subjects will be given their last three rounds and allowed to fire at their third target which will be scored by the evaluator with the template. A "Go" or "No Go" will be given accordingly.

(Note: For added information, the three separate targets numbered 1, 2, and 3 can be stapled together and later analyzed according to progression whether or not the individual subject could zero his M16A1 Rifle. This, of course, would be the best and most accurate method of scoring, but more time consuming on the evaluator.)

* 1 target may suffice but 3 would simplify matters.

** 9 rounds may be too demanding but their rifles should be close if not on zero now.

Scoring:

Scores will be determined from the third target using a 25 meter target template. Determine the center of the shot group. Measure from the center of the shot group to the target center. This is for the third shot grouping. This represents the subject's score. If the three holes line up according to the template, the subject will be scored "Go"; otherwise "No Go".

(Note: This method of scoring is the easiest and quickest but may not be the fairest method.)

Score Sheet:

Zero an M16A1 Rifle		15.009	
Name/Subject No.:		Date:	
Rank:		Evaluator	
Skill Level:			
	GO		No Go

Station 3 Part A

15.009 25 Subjects at a Time

Organization	10 Minutes
Instruction	10 Minutes (Questions Anticipated)
Firing	3 Minutes
Sight Adjustment	10 Minutes
Organization	7 Minutes
Firing	2 Minutes
Sight Adjustment	7 Minutes
Organization	5 Minutes
Firing	2 Minutes
Evaluator Time	<u>10 Minutes</u>
Total	66 Minutes Per 25 Subjects

Test Station 3 Part B

15.010 Engage a Stationary Target With an M16A1 Rifle

Items Required:

Subject

1. M16A1 Rifle
2. Steel Helmet (Pot)
3. Magazine
4. Ear Plugs
5. 15 rounds of Ammunition per Subject

Evaluator

1. Score Sheet and pencil
2. Ear Plugs

Purpose:

The subject will be scored according to his ability to fire and hit stationary targets at various ranges under timed conditions.

Procedure:

The subject will be given one magazine with fifteen rounds. The subject will fire from a foxhole, supported position, using the semi-automatic position. There will be fifteen targets presented, one at a time at various ranges. The subject will have five seconds to fire one shot at targets 200 meters or less and ten seconds at targets over 200 meters. The subject will be scored for each target knocked down with a "Hit"; otherwise "Miss."

Score Sheet:

Engage a Stationary Target With an M16A1 Rifle			15.010	
Name/Subject No.:		Date:		
Rank:		Evaluator:		
Skill Level:				
Range Meters	Round Number	Time Seconds	Hit	Miss
75	1	5		
75	2	5		
75	3	5		
175	4	5		
175	5	5		
300	6	10		
75	7	5		
75	8	5		
75	9	5		
175	10	5		
175	11	5		
300	12	10		
75	13	5		
175	14	5		
300	15	10		
Malfunction? Yes No		TOTAL		

Scoring Instructions:

Evaluator will check appropriate box according to subject's ability.
"Malfunction" box should also be checked.

Station 3 Part B

15.010 25 Subjects at a Time

Organization
Instruction
Firing

10 Minutes

10 Minutes (Questions Anticipated)

3 Minutes (Malfunction Anticipated)

Total

23 Minutes Per 25 Subjects

Test Station 4 Parts A and C

15.001 Disassemble/Assemble An M16A1 Rifle

Items Required:

Subject

1. M16A1 Rifle
2. One Dummy Round
3. Poncho

Evaluator

1. Stopwatch
2. Score Sheet and Pencil

Purpose:

Subject(s) is timed and scored on time basis of (1) disassembling and (2) assembling correctly the M16A1 Rifle.

Procedure:

Step 1. Subject(s) is instructed to disassemble the M16A1 Rifle bolt mechanism down to the bolt within a one minute time limit. The evaluator will instruct when to begin and stop. At the end of the time limit, the subject(s) will be instructed to step back from the disassembled weapon at which time the evaluator will check for the bolt separated from the bolt carrier. The subject(s) will be given a final "Go" or "No Go" accordingly. At this point, the disassembly of the M16A1 Rifle task will be completed.

Step 2. Subject(s) is instructed to assemble the M16A1 Rifle bolt mechanism to "correct operational use" within a one minute time limit ("correct operational use" means the M16A1 Rifle is capable of firing). The evaluator will instruct the subject(s) when to begin and stop. At the end of the time limit, the subject(s) will be asked to step back from the weapon. The subject(s) will be given a final "Go" or "No Go" accordingly. At this point, the assembly of the M16A1 Rifle task will be completed.

Performance Criteria

<u>Step 1.</u>	<u>Points</u>
a. "Go" - Was able to disassemble the M16A1 Rifle within the prescribed time limit.	2
b. "+" - Was able to disassemble the M16A1 Rifle with added time.	1
c. "No Go" - Was not able to disassemble the M16A1 Rifle.*	0
 <u>Step 2.</u>	
a. "Go" - Was able to assemble the M16A1 Rifle within the prescribed time limit.	2
b. "+" - Was able to assemble the M16A1 Rifle with added time.	1
c. "No Go" - Was not able to assemble the M16A1 Rifle.	0

* A "No Go" at this point automatically eliminates the subject(s) from continuing this task performance.

Proposed Score Sheet:

Disassemble/Assemble M16A1 Rifle						15.001
Name/or Subject No.:				Date:		
Rank:				Evaluator:		
Skill Level:						
Step 1			Step 2			
Go			Go			
+			+			
No Go			No Go			

Instructions:

If a "Go", simply check mark box to the right.

If a "+", mark box and add in extra time needed in the space next to the check box.

If a "No Go", same as "Go".

Station 4 Parts A and C

15.001 Disassemble/Assemble

Can be done in a group effort (Group = 50)

Set Up Time (Subject)	5 Minutes
Instruction Time (Step 1)	4 Minutes (Questions Anticipated)
Step 1	1 Minute
Evaluation Time	10 Minutes
Instruction Time (Step 2)	2 Minutes
Step 2	1 Minute
Evaluation Time	<u>5 Minutes</u>

Total 28 Minutes Per Group of 50

If all 150 are tested at one time - 1 Hour 50 Minutes.

Test Station 4 Part B

15.003 Service An M16A1 Rifle

Items Required:

Subject

1. M16A1 Rifle
2. M16A1 Rifle Cleaning Rod with Brush

Evaluator

1. Score Sheet and Pencil

Purpose:

Subject is scored according to the proper action to be taken while cleaning the bore of the M16A1 Rifle.

Procedure:

Subject will be instructed to break the M16A1 Rifle down ("shotgun style") at the rear takedown pin. The bolt carrier and charging handle will be removed and laid aside. The subject will then be instructed to simulate cleaning the bore using the M16A1 cleaning rod and brush. The subject must accomplish two steps to qualify as "Go".

Performance Criteria:

	<u>Points</u>
1. Cleaning rod <u>must</u> be inserted from chamber to muzzle.	2
2. Cleaning rod must extend past the muzzle before being withdrawn.	2
<u>Any</u> deviation or attempt to insert or withdraw cleaning rod from the above steps will be classified as "No Go".	0

Score Sheet:

Service an M16A1 Rifle		15.003
Name/Subject No.:		Date:
Rank:		Evaluator:
Skill Level:		
	Step 1	Subject did insert cleaning rod from chamber to muzzle.
	Step 2	Subject did push cleaning rod through the end of muzzle <u>before</u> withdrawing.
Go		
No Go		

Scoring Instructions:

Evaluator will check each step as subject performs them. If subject performs each step correctly, the evaluator will check "Go". If the subject should fail to perform the first step correctly, the evaluator will strike a line through the "Step 1" box and score the subject "No Go". The same will be done for "Step 2".

Station 4 Part B

15.003 5 Subjects at a Time

Instruction	3 Minutes (Questions Anticipated)
Test	2 Minutes
Evaluation	<u>1 Minute</u>

Total 6 Minutes Per 5 Subjects

ATTACHMENT 4c

LAND NAVIGATION PERFORMANCE TEST (PROTOTYPE)

The following test provides an example of what is required in the way of an individual test for the field validation portion of this project. Thirty individual tests of this nature need to be developed to ensure independent work by the skill level 40 test subjects. (Forty tests need to be developed for the skill level 20 test subjects.) The input for the additional 29 (39) tests could be acquired as follows:

- Requirements 1, 4, 5a, 5b, and 9 could be provided by the Land Navigation Committee, USAIS, based on information they already have available.
- Requirements 3, 6, 7, 8, 10, 11, and 12 could be developed by a HumRRO Research Associate using the prototype questions as a model.
- Requirement 2, will remain the same for all tests and should be graded on the subjects' response to Question 1 immaterial of Question 1's correctness. Even if the wrong location is recorded as the answer to Question 1, the elevation must be computed for that location, and if the elevation is correct, full credit is to be given.

Support Requirements

The list below contains all support requirements necessary to administer the Land Navigation Performance test. This is shown both for 40-skill level and 20-skill level versions of the test.

I. Terrain Support:

The Yankee Road Land Navigation course area reserved for one-half day. (Test [40-skill level] will take approximately 2-3 hours to complete. 20-skill level versions will take approximately 1-2 hours to complete.)

II. Subject Support:

Subject support required will consist of 40 skill level-20 and 30 skill level-40 personnel. These personnel should be selected from 8 Combat Arms MOSs (11B, 11C, 11D, 11E, 13E, 16P, and 16R)- grades unknown. Transportation is to be provided by parent unit. Troops to arrive with filled canteens.

III. Equipment Support:

70 Yankee Road area map sheets
70 Protractors
70 Compasses
70 Pieces of scrap paper
70 Pencils
70 Metric Conversion Scales (for third requirement)
40 Individual Tests (Skill level 20)
30 Individual Tests (Skill level 40)

IV. Test Proctor Support:

1 Officer, Land Navigation Committee

*3 NCOs, Land Navigation Committee

1 Research Associate, HumRRO

3 Research Specialist, HRU

Support Items I, III, and IV would have to be coordinated with USAIS, and Item II with USAIC. Item IV could be negotiated (i.e., more support from USAIS and less from the HRU).

*If requirement twelve is to be accomplished, it will be necessary to have approximately 35 proctors (2 testees per proctor). Otherwise, the requirement will have to be the same for everyone, and be accomplished individually. This would greatly increase the length of the testing time. Another possibility is to set up a peer scoring system for this requirement. This should be studied further.

LAND NAVIGATION PERFORMANCE TEST ~ SKILL LEVEL 40

Administrative Instructions:

Proceed from your present location to a stake on Yankee Road numbered 2.

03.009 First Requirement:

03.012 What is the map coordinate location of this stake to the nearest ten meters?

03.013 (1) _____

Equipment: Map and protractor

Scoring : Response is to be marked correct if within 100 meters on either side of correct answer.

Example: If correct answer is GL04657798,
the following responses are to be
marked correct: GL04757808,
GL04557788, and those in between.

03.024 Second Requirement:

Determine elevation of the ground at this coordinate (coordinate provided in response to first requirement).

(2)

Equipment: Map and protractor

Scoring : Response is to be marked correct if within 10 feet on either side of correct answers.

Example: If correct answer is 375 feet,
the following responses are to
be marked correct: 365 feet,
385 feet, and those in between.

03.006 Third Requirement:

03.027 Determine the gradient (% degree of slope of terrain)
from coordinate GL05007800 to Hill 448 at coordinate
03.028 GL05107855.

(3) _____

Equipment: Map, protractor, and metric conversion scale

Scoring : Response is to be marked correct if
within 10% of correct answer on either side.

Example: If correct answer is 40%,
the following responses
are to be marked correct:
36%, 44%, and those in between.

03.009 Fourth Requirement:

03.012 From this position (stake numbered 2)
proceed to coordinate GL06237845.
03.013 What position stake is located at
this coordinate?

(4) _____

Equipment: Map and protractor

Scoring : The response must be exact to be correct.

Example: If correct position stake is
number 4, that is the only
acceptable answer.

03.002 Fifth Requirement:

03.004 Proceed from this position on a magnetic
azimuth of 295° to a stake located on
03.012 Control Road. What Control Stake is
located at this coordinate?

03.013 _____ (5a)

What is the map coordinate location of this
stake to the nearest ten meters?

(5b) _____

Equipment: Map and protractor

Scoring : For (5a), the response must be exact to be correct.

Example: See Example for fourth requirement.

For (5b), the response is to be marked correct if within 100 meters on either side of correct answer.

Example: See Example for first requirement.

03.005 Sixth Requirement:

Convert the grid azimuth of 166° to a magnetic azimuth.

(6) _____

Equipment: Map and protractor

Scoring : The response must be exact to be correct.

Example: If correct answer is 165-1/2° that is the only acceptable answer.

03.002 Seventh Requirement:

03.004 From an observation post (OP) on Hill 396
03.014 located at GL03737858 you receive a report of a gun firing on a magnetic azimuth of 156°. From a second OP on Hill 447 located at GL04707929 you receive a report of the same gun firing on a magnetic azimuth of 186-1/2°. What is the gun's position to the nearest ten meters?

(7) _____

Equipment: Map and protractor

Scoring : Response is to be marked correct if within 50 meters on either side of correct answer.

Example: If correct answer is GL04477719, the following responses are to be marked correct: GL04427714, GL04527724, and those in between.

03.002 Eighth Requirement:

03.003 You are unclear as to your exact position
03.004 but you can see Hill 447 which is located
at GL04707929. It is on a magnetic azimuth
03.015 of 354-1/2° from you. You can also see Hill 396
which is located at GL03737858. It is on
a magnetic azimuth of 294-1/2° from your
position. What is your position to the
nearest ten meters.

(8) _____

Equipment: Map and protractor

Scoring : Response is to be marked correct
if within 50 meters on either
side of correct answer.

Example: See Example for seventh
requirement.

Administrative Instructions:

Proceed from your present location to _____
where you will turn in your protractor and draw a
lensatic compass. After having accomplished this,
start your ninth requirement.

03.001 Ninth Requirement:

03.005 Proceed along Control Road until you arrive
at Control Stake M. From this Control Stake
03.011 what numbered stake is located on a grid
azimuth of 188-1/2° and a map distance in
03.012 meters of 820 meters?

(9) _____

03.013

Equipment: Map and compass

Scoring : The response must be exact
to be correct.

Example: See Example for fourth
requirement.

03.003 Tenth Requirement:

What is the back grid azimuth of
a magnetic azimuth of 188°?

(10) _____

Equipment: Map and paper

Scoring : The response must be exact
to be correct.

Example: See Example for sixth requirement.

03.006 Eleventh Requirement:

Measure the road distance on the Yankee Road
area map from the trail intersection at
GL03507745 moving NE along the trail to the
trail and road intersection at GL05507925.
What is it?

(11) _____ meters

Equipment: Map and paper

Scoring : Response is to be marked
correct if within 150 meters
on either side of correct answer.

Example: If the correct answer
is 2000 meters, the
following responses are
to be marked correct:
1850 meters, 2150 meters,
and distances in between.
Note: This applies only
to road (curved) distance.

Administrative Instructions:

Proceed from your present location to _____
where you will turn in your map. After having accomplished
this, start your twelfth requirement with a test proctor
accompanying you.

03.027 Twelfth Requirement:

Proceed along Control Road until you arrive at Control Stake S. From this Control Stake what numbered stake is located on a magnetic azimuth of 200° and a distance in meters of 900 meters. The test proctor will accompany you and at an appropriate time designate a barrier (simulated) that you must bypass by utilizing navigational techniques.

(12) _____

Equipment: Compass

Scoring : The response must be exact to be correct. If incorrect navigational techniques are used and observed by proctor, no credit for correct answer is to be given.

Example: See Example for fourth requirement

LAND NAVIGATION PERFORMANCE TEST - SKILL LEVEL 20

Administrative Instructions:

Proceed from your present location to a stake on Yankee Road numbered 2.

03.009 First Requirement:

03.012 What is the map coordinate location of this stake to the nearest ten meters?

03.013 (1) _____

Equipment: Map and protractor

Scoring : Response is to be marked correct if within 100 meters on either side of correct answer.

Example: If correct answer is GL04657798, the following responses are to be marked correct: GL04757808, GL04557788, and those in between.

03.009 Fourth Requirement:

03.012 From this position (stake numbered 2) proceed to coordinate GL06237845.

03.013 What position stake is located at this coordinate?

(4) _____

Equipment: Map and protractor

Scoring : The response must be exact to be correct.

Example: If correct position stake is number 4, that is the only acceptable answer.

Administrative Instructions:

Proceed from your present location to _____ where you will turn in your protractor and draw a lensatic compass. After having accomplished this, start your ninth requirement.

03.001 Ninth Requirement:

- 03.011 Proceed along Control Road until you arrive
at Control Stake M. From this Control Stake
03.012 what numbered stake is located on a magnetic
azimuth of 188° and a map distance in meters
03.013 of 820 meters?

(9) _____

Equipment: Map and compass

Scoring : The response must be exact
to be correct.

Example: See Example for
fourth requirement

03.006 Eleventh Requirement:

Measure the road distance on the Yankee Road
area map from the trail intersection at
GL03507745 moving NE along the trail to the
trail and road intersection at GL05507925.
What is it?

(11) _____ meters

Equipment: Map and paper

Scoring : Response is to be marked
correct if within 150 meters
on either side of correct answer.

Example: If the correct answer
is 2000 meters, the
following responses are
to be marked correct:
1850 meters, 2150 meters,
and the distances in between
Note: This applies only
to road (curved) distance.

Administrative Instructions:

Proceed from your present location to _____
where you will turn in your map. After having accomplished
this, start your twelfth requirement with a test proctor
accompanying you.

03.027 Twelfth Requirement:

Proceed along Control Road until you arrive at Control Stake S. From this Control Stake what number stake is located on a magnetic azimuth of 200° and a distance in meters of 900 meters. The test proctor will accompany you and at an appropriate time designate a barrier (simulated) that you must bypass by utilizing navigational techniques.

(12) _____

Equipment: Compass

Scoring : The response must be exact to be correct. If incorrect navigational techniques are used and observed by proctor, no credit for correct answer is to be given.

Example: See Example for fourth requirement